Original Articles.

GONORRHEAL METASTATIC ARTHRITIS.

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SINCE the year 1781,when Salle and Swediaur first made mention of a condition which they described as "an inflammatory articular affection dependent upon gonorrhea," that systemic complication of gonorrheal blennorrhagia now commonly known as gonorrheal rheumatism or more correctly as gonorrheal metastatic arthritis has, as Keyes states, claimed a greater share of the attention of the profession than its frequency warrants,—a claim which is due to its activity and its severity. That its importance is being more generally recognized is demonstrated by the fact that within the past few years much new thought has been added to the already voluminous literature on this interesting subject, and although all agree on the importance of early recognizing this condition clinically, still no two writers agree on the method of treatment. For this reason it has occurred to the writer that a compilation of the ideas expressed by the recent contributors on this affection together with a summary of their methods of treatment would be of material value.

Hahn of Breslau, who has made an exhaustive study of this disease, states that of the numerous metastases of gonorrhea which he has met with in his vast experience, gonorrheal rheumatism deserves first place. It has been reported from conservative workers that between two and three per cent. of all our patients suffering with Neisserian urethritis become afflicted with this disease. The malady is more common in men than in women. It has been found that the condition may be due to constitutional invasion and localization in the synovial membranes of joints, tendons, and bursae by the gonococcus alone, sometimes apparently to mixed infection, with pyogenic bacteria in addition. It occurs frequently after the passage of a sound into the urethra. Many cases have also been reported in vulvovaginitis of little girls and in gonorrheal ophthalmia of babies. Krissel states that women seem to be almost immune to this complication, which is supposed to be due to the fact that the vagina and not the urethra is the usual seat of gonorrhea in the female. This, however, is only a supposition. We find the initial infection at least as often in the female urethra as in the vagina. He believes moreover that the cause of this apparent immunity is to be found in the difference of the structures of the female urogenital tract and, secondly, to the lesser chance of traumatic injury to the urethra and vagina in the course of treatment of a gonorrhea. In the light of our present knowledge of the etiology of gonorrheal metastasis, it requires either local retention with a subsequent trauma of some sort or an abrasion of the protecting epithelium in order to allow the escape of the bacteria or their toxins into the blood-vessels or the lymphatics. Such a trauma may be a mechanical one, but a sexual excitement or a congestion from any source may serve the same purpose. Epithelial lesions may be produced by instrumentation, but the invasion of the deep urethra or the vesical neck and the trigone by the gonorrheal process leading to more or less congestion and bleeding is sufficient to expose smaller blood-vessels and offer an escape of the bacteria and their toxins. Neither endourethral instrumentation nor the invasion of the posterior urethra and the trigone usually occurs in the earliest stage of the disease and, therefore gonorrheal metastatic arthritis is rarely observed in this stage. It is rather the exception than the rule for our patients to develop symptoms of this malady in the acute stages of a gonorrheal infection, although I have seen it develop in the third and fourth weeks following the initial symptoms. It is rarely seen at an earlier period. In chronic cases it oft times appears before the prodromal symptoms make their appearance.

Two cases. as illustrations of early onset, which are still fresh in my memory, occurred some years ago while the writer was a resident interne in the Marine Hospital at New Orleans. The first instance was in the case of a stoker in the Navy who developed metastatic arthritic symptoms on the thirteenth day following his initial urethral infection with the gonococcus, and the second instance occurred in a marine whose arthritic symptoms developed exactly twenty-one days after his first clap. In both instances the patients denied all previous venereal infection and I had no reason to doubt the truth of their statements.

As to the number of joints which become involved, statistics show that in about 30 per cent. of the cases one joint only is involved and that in the remaining 70 per cent. the lesions are polyarticular. Regarding the distribution of gonorrheal metastatic arthritis, Lovett quotes 755 cases from the collective figures of Northup, Finger and Benecke and states that in their cases the joints were affected in the following order of frequency:

Knee	258
Ankle	125
Wrist	76
Elbow	53
Small joints of hand	50
Small joints of foot	46
Shoulder	44
Hip	42

Heel and toes	21
Temporomaxillary	16
Other articulations	24

These figures, I believe, compare favorably with those of all other workers who have taken the pains to tabulate their findings. All agree that the knee is the joint most commonly involved and sometimes we find it the only articulation affected. Large, swollen and intensely painful ankle and wrist joints are also common pictures in this disorder. The other joints are involved much in the same proportion as given in the figures above.

I desire here to report a case which to me was very interesting because of the fact that the articulation involved is one not commonly invaded by the gonococcus. The patient was a white male, single, 25 years old and a tailor by occupation. He gave a history of having contracted gonorrhea six weeks previously, had taken no treatment for the urethritis and he came to me, not for the urethral condition, but for severe pains "back of his right hip" as he described it. He still had a profuse urethral discharge in which I had no trouble demonstrating Gram-negative diplococci, there was swelling and severe pain on pressure over right hip localized to the area directly over right sacro-iliac joint and his suffering was so intense that it was with effort that the patient walked or even stood erect. Temperature 101 F. Joint was aspirated and 10 cc. of serous fluid withdrawn in which gonococci were demonstrated by centrifugal methods. Prostate and seminal vesicles were normal. The treatment consisted in absolute rest in bed, immobilization of affected hip with adhesive plaster strips, energetic local treatment for urethral condition and Bier's active hyperemia to affected joint. In two weeks time the urethral discharge had greatly diminished, the pains in the hip had disappeared and within three and a half weeks the patient was back at his usual occupation. Two years have now elapsed and there has been no return of the trouble.

The types of this affection that we usually see come under the following five headings:

1. Arthralgia without definite lesions in the joint.
2. Acute serous synovitis with much peri-articular swelling.
3. Acute fibrinous or plastic synovitis with slight effusion.
4. Chronic serous or purulent synovitis.
5. Involvement of peri-articular structures, such as bursae and tendon sheaths.

As to the management of cases of gonorrheal metastatic arthritis much has been written within the last few years. Practically everything known in therapeutics has been tried in the hope of finding some amenable remedy for this troublesome complication of gonorrhea but unfortunately, up to the present time at least, we have no absolutely dependable fixed method of treatment which we might conscientiously follow. Among the methods which have been vaunted from time to time might be mentioned: the employment of the galvanic and the faradic electric currents, the Röntgen rays, radium, the actual cautery, active and passive hyperemia according to the methods of Bier, wet hot and cold packs, blistering, tincture of iodine, ichthyol, and similar preparations locally applied, vaccines, serums and the bacterial derivatives. Of the surgical treatments we might mention aspiration alone, aspiration with injection of Murphy's two per cent. formalin in glycerin, arthrotomy and the Fuller operation of seminal vesiculotomy. These are but a few of the many methods; the list could be carried along *ad infinitum*.

Some years ago Kreissl was asked by a colleague how he treated his cases of gonorrheal rheumatism and his reply was, "By treating the gonorrheal focus." I am sure that today we all agree with him that this is the only logical procedure to follow for if the joint disease is due primarily to a gonorrheal urethritis, the inflammatory arthritis will subside promptly if the source of infection is eliminated. All of our injections, irrigations, dilatations and topical applications will fail to relieve our patients if the retention foci are not removed, be they in the prostate, the seminal vesicles, in Cowper's glands, in the follicles or in the crypts.

Cumston has recently laid great stress on the prophylactic measures which he has employed with success in the treatment of cases of gonorrheal rheumatism. He advises the internal administration of salol in five to ten grain doses, four times daily after meals and at bed-time. He cites a case of a physician who had gonorrhea twice and on both occasions there developed a severe tenosynovitis of the tendons of both feet. With this patient's third infection he was placed on ten grains of salol four times daily and the writer ends his report by stating that the patient rapidly recovered from the urethritis under local treatment and no symptoms of gonorrheal rheumatism appeared.

It seems still to be a disputed question as to whether the affected parts should be completely immobilized or not, and while many who have written on this subject recommend that the joints be absolutely immobilized over the entire period of the inflammation, others, among them Hume, are inclined to be more conservative and advise that the joint affected be kept in splints no longer than twelve hours on a stretch for fear that permanent ankylosis of the part may result therefrom. During the interval, in which joint is removed from the splints, passive movements might be practiced so as to retain its function as much as possible.

Pain is frequently a factor to be reckoned with in these conditions and whereas in some instances it will be mild and transitory, at other times it is of such a nature as to require the administration of morphine, codeine, veronal or the salicylates to relieve same. In gonorrheal tenosynovitis, which Cumston states is the mildest form of gonorrheal rheumatism, he advises rest of the parts affected and in intense pain he states that blood-letting works like a charm. Although I have not employed this latter method myself, it certainly is worthy of a trial.

The massage of the prostate and seminal vesicles seems to play an important part in the relief so frequently reported in some cases of this malady. Kreissl advises that massage of the prostate and seminal vesicles should be performed daily of from one-half to one minute duration, and states that this treatment should be kept up until no more septic material appears in the washings for at least two weeks, and even then it should be discontinued by gradually increasing the intervals between massaging.

Locally to the joints, lead and opium lotion, ice caps, hot or cold wet packs, saturated solution of magnesium sulphate, ichthyol fifty per cent., and the actual cautery have, I believe, given most satisfactory results. Holland instructs his patients to drink one-half gallon of water daily and to eat light, easily digested food, without much meat. He gives his patients an early morning bath, after which they are put to bed until noon; in the afternoons freedom is allowed if no pains are felt. Bier's obstructive hyperemia by means of the elastic bandage, should be employed early in the treatment of gonorrheal metastatic arthritis. The sooner after the onset of the articular pains the elastic bandage is applied, the better will be the results obtained. Bier stated that in cases in which this treatment is started within the first few hours after the pain sets in, the improvement is often so rapid and striking that the correctness of the diagnosis may be questioned. In three cases I have had the opportunity to verify these statements. I have seen three patients within a day after the initial symptoms of the rheumatism had set in. All three cases had been treated by me for chronic posterior urethritis of gonorrheal origin. I immediately applied the elastic bandage, also elevated the limbs in the interval of treatment in order to reduce the edema. Two treatments daily were given of ten hours each. In all three cases I found a marked diminution of pain in the parts affected, and also increased mobility. The treatment was continued for twenty hours daily until the fever had subsided and then the time of treatments daily were reduced. Bier's active hyperemia (steaming or baking the joint) has also been used with good results, in selected cases, but as a rule its results have not been as encouraging as those obtained by the passive hyperemia with the elastic bandage.

As far as can be ascertained, the actual value of the serums, vaccines and the bacterial derivatives in the treatment of gonorrheal arthritis has not been finally determined. It is commendable to note here that the fourth congress of the German Urological Association, which met in Berlin in the fall of last year, had an interesting symposium on serotherapy and vaccine therapy in its relation to urology, in which such men as von Wassermann, Schneider and Asch discussed this question. It is to be hoped that in the near future more will be known as to the actual value of these agents in genitourinary surgery. Hartwell, who reported a series of cases of gonorrheal arthritis treated by the vaccines, and who was one of the first in this country to try them in this condition, sums up his article by stating that: "From observations on 51 cases it would seem that gonococcus vaccines are a valuable therapeutic agent in gonorrheal arthritis in all stages of the inflammation except where ankylosis has occurred. They do not however, seem to be able to prevent extension to fresh joints in early cases, and certainly do not produce enough lasting immunity to prevent recurrence of arthritis. Autogenous vaccines seem to be more efficient than stock, thus corresponding to the known specificity of biological substances."

W. G. Young has reported 28 cases of gonorrheal rheumatism treated with the vaccines with these results: cases cured 20; improved 5; not improved 3. The doses he employed varied from 5 million to 50 million bacteria, and I think his results interesting because he states that practically no other treatment was employed in this series excepting the vaccines. J. S. Read, and, more recently, Holland have reported excellent results by using the mixed (polyvalent) gonococcus vaccine. Holland uses an initial injection of 400 million, followed in two days with 500 million; four days later he gives 900 million and this dose is repeated every four days until the desired results are obtained. Broeman has emphasized the importance of treating every case of gonorrheal rheumatism immediately with either the antigonococcus serum, gonococcus vaccine or the newer bacterial derivatives whether they are stock or autogenous products. The combined bacterins (Van Cott) seems to be more useful than the single strain cultures. The initial dose he places at between 10 and 20 million, running up the dose every second, third or fourth day, until about 50 million are being given every second or third day. Usually within a week or ten days improvement may be expected, but from four to six weeks elapse before all symptoms have subsided. The antigonococcic serum is administered in the same manner.

Nothing has yet been found that does a particle of good when given internally to our cases of joint complication following gonorrheal infection, so with this statement we can con-

scientiously pass over the internal treatment for something more promising.

The newer surgical procedures at our command, which have been employed in combating this Frankenstein of urology, have undoubtedly done much toward curing the severer forms of the disease. Of the numerous operations advocated by their enthusiastic originators, I will content myself by making mention of but four, namely, (1) aspiration of the joint alone; (2) aspiration of joint plus the injection into same of some antiseptic or disinfectant; (3) making incision into joint, irrigating and draining same according to the method of Schuller; and (4) Fuller's operation of seminal vesiculotomy. Taking them up separately we might say that it is reasonable to believe that some cases have apparently been cured by simply aspirating the accumulated fluid from the affected joint; sometimes a single aspiration will suffice, while in other cases the procedure must be repeated at intervals as needed. The aspiration of gonorrheal joints with the injection of an antiseptic or disinfectant solution has been popularized by Murphy in this country and by Hildebrand and Roux in Europe. Murphy uses a two per cent. dilution of liquor formaldehydi in glycerin, and of this solution he injects 5 to 20 cc. depending upon the quantity of fluid aspirated and the size of the joint. With this method he has reported excellent results and many other reports just as promising have come from other writers who have given this method a fair trial. The technique of Hildebrand and Roux differs little from that recommended by Murphy except that they inject tinctura iodidi (3i to 3iii) into joint instead of liquor formaldehydi.

When either or both of the above treatments fail, the joint should either be freely opened, cleansed, packed and drained, or double drainage should be instituted with daily through and through irrigations of 1-5,000 bichloride of mercury solution.

Fuller of New York has recently given us a new method for curing our cases of gonorrheal arthritis by his operation of seminal vesiculotomy. Up to the present time Fuller has performed this operation 251 times, 122 of which were for gonorrheal metastatic arthritis, without a single fatality. In his last report the author shows that most of the cases, both acute and chronic, were of very severe grade and it was primarily for the relief of the rheumatic symptoms that seminal vesiculotomy was done. He believes that the rheumatism is the clinical symptom of seminal vesiculitis which usually, by incapacitating the individual, brings him to the hospital; and in his experience at the City Hospital, when those suffering from rheumatism see the rapid cures resulting with little post-operative discomfort in those who have been subjected to seminal vesiculotomy, there is such a scramble for operation that no time has to be wasted in persuasion. In a personal communication to the writer, Fuller states that it is not logical, in his opinion, to employ any local treatment in this disease, for he claims that such treatment is decidedly faulty in that the individual is not freed of the primary focus which causes the toxemia of which the joint is only one of the evidences.

Up to the present time however, the Fuller operation has found few enthusiasts, the reason, I believe, being that most conservative surgeons look upon this operation as rather a severe ordeal to subject patients to, and most of us would prefer to try every other means at our disposal before having them undergo this operation. To do this operation undoubtedly requires some skill and experience. The technique cannot be properly acquired from the literature. To have seen this operation performed several times by a competent surgeon is, in the opinion of our leading urologists, the only manner in which it can be thoroughly mastered.

FURTHER OBSERVATIONS OF SEASONAL AND METEOROLOGIC INFLUENCE UPON TUBERCULAR PATIENTS.

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Through the year 1913 we continued our study of the correlation between certain phenomena manifested by tubercular patients and meteorologico-seasonal change. This is in accordance with the interesting results learned from a similar investigation carried on during 1912 and published one year ago.[1]

It should be worth while to collect facts and data pertaining to such clinical observations as seem casually to have some connection with weather change and to arrange them along side meteorologico-seasonal change. This is in accurrence. For this purpose corresponding indices on the charts represent the respective variations; and it can be noted almost at first sight the amount of coincidence or correlation occurring from day to day and month to month.

In this way a graphic arrangement by means of correlative indices gives a ready and impressive picture of the influence which the weather might have upon any group of tubercular patients in this locality.

"We live in the laboratory of the earth's atmosphere" says Prof. Ward of Harvard University.[2] This is particularly true of the sanatorium patient who, although sheltered from the extremes of weather, is so intimately associated with his natural out-door environment that he can hardly escape the influence of its

changes. Hence we should except the likelihood of some reaction by the tuberculate arising from weather and seasonal variations.

Our bodies try to adjust themselves to the changing conditions of the medium in which we live. A healthy individual although naturally better equipped with compensatory powers for adapting himself to his varying atmospheric environment has the means of seeking close shelter for the larger part of twenty-four hours, and especially from so-called undesirable weather; therefore he is perhaps not so readily subject to meteorological influence except if he be an individual who "incubates" to such an extent that exposure to any weather change effects him profoundly.

However, it should be said that among those patients who take all that the treatment offers, spending a maximum amount of time in the open air, that such a thing as a "cold" is very rare. While this patient is afflicted with a serious constitutional disease, he is nevertheless able to withstand the rigors of riotous atmosphere better than his well brother who must be inside the greater part of each day.

Last year our study was confined to the patients' weight changes by months, and at the same time to the effect of supplementary diet as a remedial measure in combating such of these changes as were of an unfavorable nature. In 1913 we investigated the same matter. Plates similar to those of 1912 are herewith presented.

Perhaps the best exhibit is the Gaining Weight Chart. The heavier index in the larger compartment represents the total number of pounds gained since admission by the male patients who have shown an improvement; at the foot of the chart may be seen two subjoined indices, the heavier of which represents the number of individuals in the male class gaining. The lighter indices above and below refer to female patients in the same manner. The number of patients involved in the make-up of this chart ranged between one hundred and ten and one hundred and thirty-five. The daily average number of patients for the year 1913 at the sanatorium was 178.56.

On this chart it is interesting to note:

(1.) The high points reached in the colder months and the sharp decline in the spring months, especially from the latter part of March to the middle of July when the low point is reached.

(2.) The women gained weight rapidly in January and February, also in September and October.

(3.) The large gain made by both wards during two weeks in October when the weather was so unpleasant that walks and exercise were much restricted and rest treatment in maximum amount was naturally in order.

(4.) Both indices leave off at the end of 1913 at a higher level than at the beginning of the year. Possibly this may be accounted for by the better cooperation on the part of patients, since the formation of the *"Sanatorium-Hospital Class"* system, whereby a greater number of patients are taking the treatment faithfully and therefore deriving greater benefit. Especially among the female patients did the sanatorium class distinction appear most popular, which may be one reason for their gross gain index running up so rapidly in the fall and early winter.

(5.) Since the total census declined slightly during the latter part of the year and since the number of patients discharged per month varied only in a small way, these two factors are practically negligible, in considering the index movements.

The trend of the indices of this chart correspond with those of a similar chart of 1912, confirming our ideas that the spring of the year constitutes a quite unfavorable season for the consumptive.

It is a matter of clinical observation that anorexia is then a common symptom among a clinic of tuberculates, which probably accounts for a considerable loss of weight.

There may appear an attendent mental phase characterized by depression, irritability of temper, unreasonableness and sometimes delusions. Thus, food which was most palatable and satisfactory to the patient during the winter months, not only loses its attractiveness, but is foresworn by the patient as "bad," "not cooked right," or "I can't eat that stuff." There seems to be a vicious circle, for with all this mental restlessness, comes a greater activity and a genuine and dangerous "spring fever."

Plate No. 2 is a discount chart which applies to the gaining weight chart. The idea is to have all the charts check up accurately to the census of the Institution, and also to explain for such part of the index movements as are clearly removed from probable seasonal influence. Thus "Patients not Weighed" and "Patients with Stationary Weight" account for the patients not enumerated on plates one and three.

Two indices which are not printed herewith deal with the census increase and the amount of meat consumption by months. The former increased from one hundred and seventy-two on March first to one hundred and eighty-two by the middle of July and then dropped to one hundred and eighty in October, which figure was maintained for the remainder of the year. Thus in those months of greatest decline in weight gained the census was increasing and was clearly a minimizing rather than exaggerating factor in determining the true intensity of seasonal variation in the spring months.

Dealing with meat consumption, the index falls in the warm months and rises sharply in the fall and winter, attesting to the genuine quality of the appetites of that season.

The "Weight Gained by Discharged Pa-

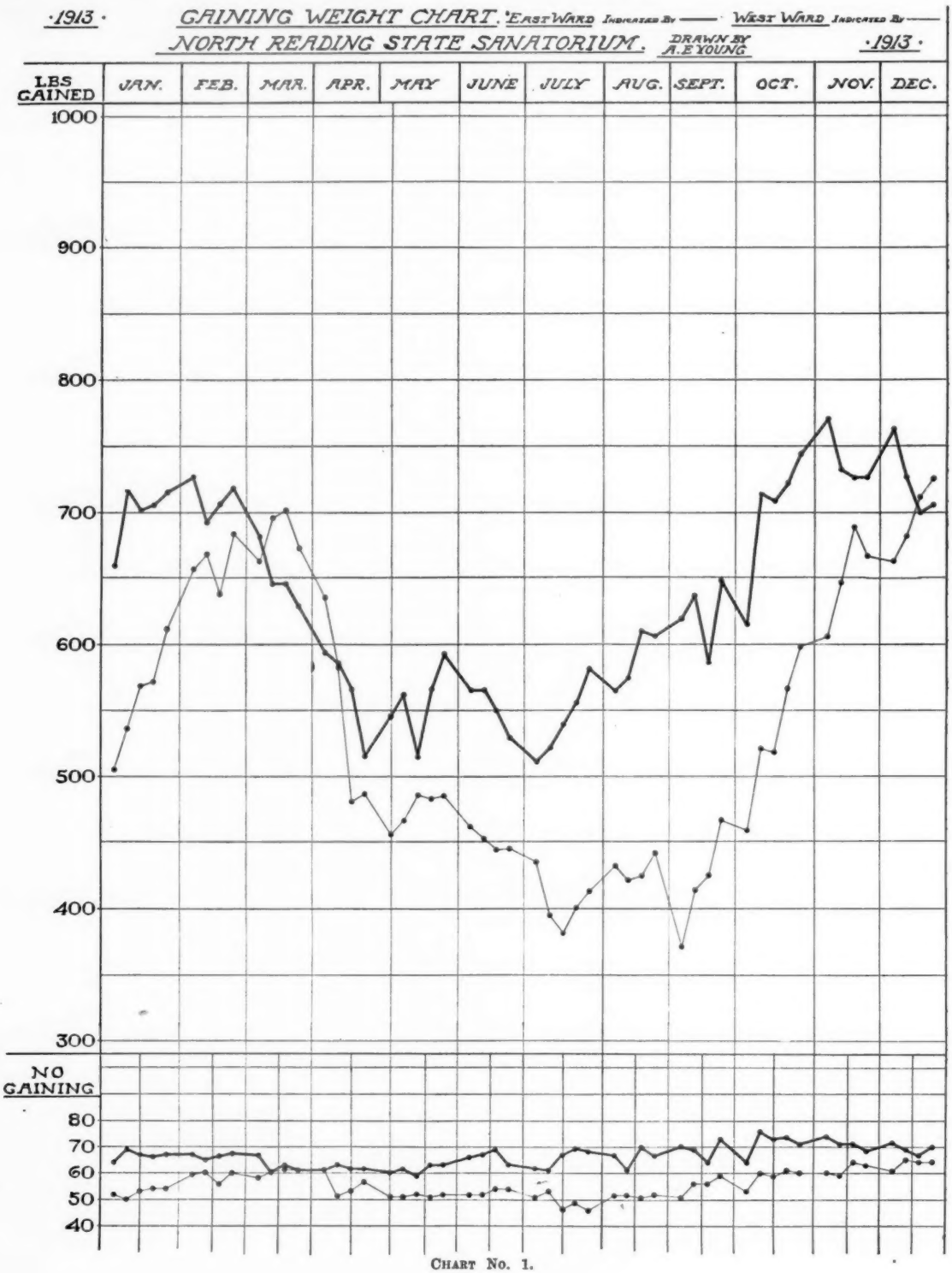


CHART No. 1.

tients'' provides figures per week which should discount certain fluctuations shown on Plate No. 1. For instance, during the week of April seventeenth, female patients credited with ninety pounds of gained weight were discharged from the institution. A loss of one hundred pounds is shown on Plate No. 1 for that week. After allowing for weight discharged, a net loss is seen, which seems characteristic of that particular season of the year.

On the other hand from October sixteenth to the thirtieth patients' gains of seventy pounds were discharged in spite of which the main female index gained about eighty-five pounds, making a gain of one hundred and fifty-five pounds; thus there is a sharp contrast between the tendency in the spring months to

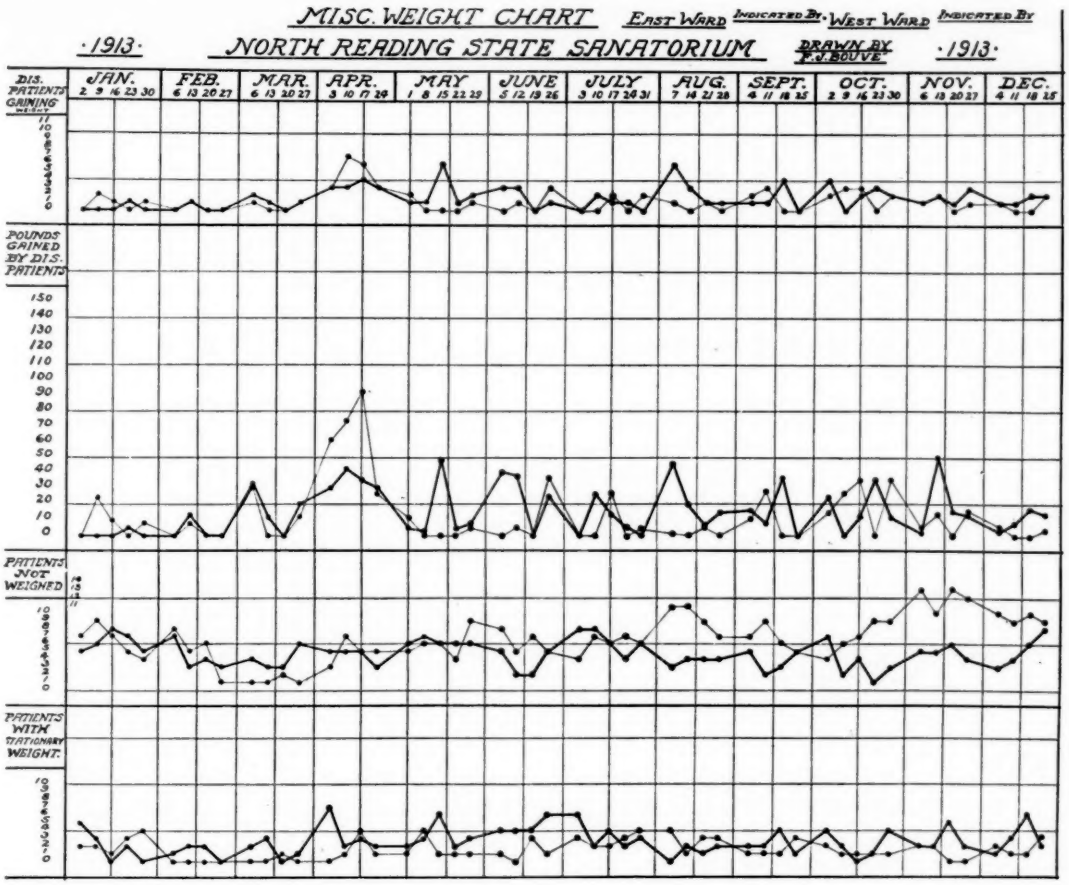

MISC. WEIGHT CHART
EAST WARD INDICATED BY · WEST WARD INDICATED BY
·1913· NORTH READING STATE SANATORIUM DRAWN BY F.J. BOUVE ·1913·
DIS. PATIENTS GAINING WEIGHT
JAN. 2 9 16 23 30
FEB. 6 13 20 27
MAR. 6 13 20 27
APR. 3 10 17 24
MAY 1 8 15 22 29
JUNE 5 12 19 26
JULY 3 10 17 24 31
AUG. 7 14 21 28
SEPT. 4 11 18 25
OCT. 2 9 16 23 30
NOV. 6 13 20 27
DEC. 4 11 18 25
POUNDS GAINED BY DIS. PATIENTS
PATIENTS NOT WEIGHED
PATIENTS WITH STATIONARY WEIGHT

CHART No. 2.

cease taking on weight and that of the fall and early winter to gain weight and to improve in general condition.

Plate No. 3 gives four indices interpreted similarly to those of Plate No. 1 except they relate to emaciation rather than to gain in weight. This chart deals with those patients who were under admitted weight and registers quantitatively perhaps better than any other index could the activity of progressive disease in patients suffering with pulmonary tuberculosis. Three things are noticeable:

(1.) The minimum amount of weight loss occurs in the colder months; (2.) The maximum loss occurs in the warmer months; (3.) The rapid increase in amount of .emaciation which appears in the spring months.

The final decline in weight of terminal cases is not shown on this chart because the weakness of such patients precludes their weighing for perhaps a long time before the end. Yet the last weight, taken some time before, must be reckoned in each week's account.

Some reason for the rebound in the lost weight indices in August and September is afforded by the fact that deaths in July outnumber all other months. The losses of patients dying are erased from the loss account and the index falls.

The factor causing the greater drop in these indices especially in the fall and winter months is constituted in the sort of patient who was below admitted weight in spring and summer but has managed to regain his weight lost and even to cross the line demarcating the gains from the losses, which change removes his records from Plate No. 3 to Plate No. 1. This change appearing in so many individual cases is confirmed in the aggregate by the direction of the indices on Plates Nos. 1 and 3.

In addition to the weight changes by months we began in 1913 an index chart picturing at various levels from the top down the records of daily barometer and wet and dry thermometer. These make three daily index curves and form "the weather department." The observations are taken on the premises and are usually about the same as reported by the United States Weather Bureau at Boston, Mass.

On lower cross lines are shown indices representing each day respectively; the total number of patients having streaked sputum and hemorrhages; the total number of bed patients; the total number having vesperal fever; and the total number having increased cough and chest soreness. By following the upright down one can see for any particular day the kind of weather which obtained and then the quanti-

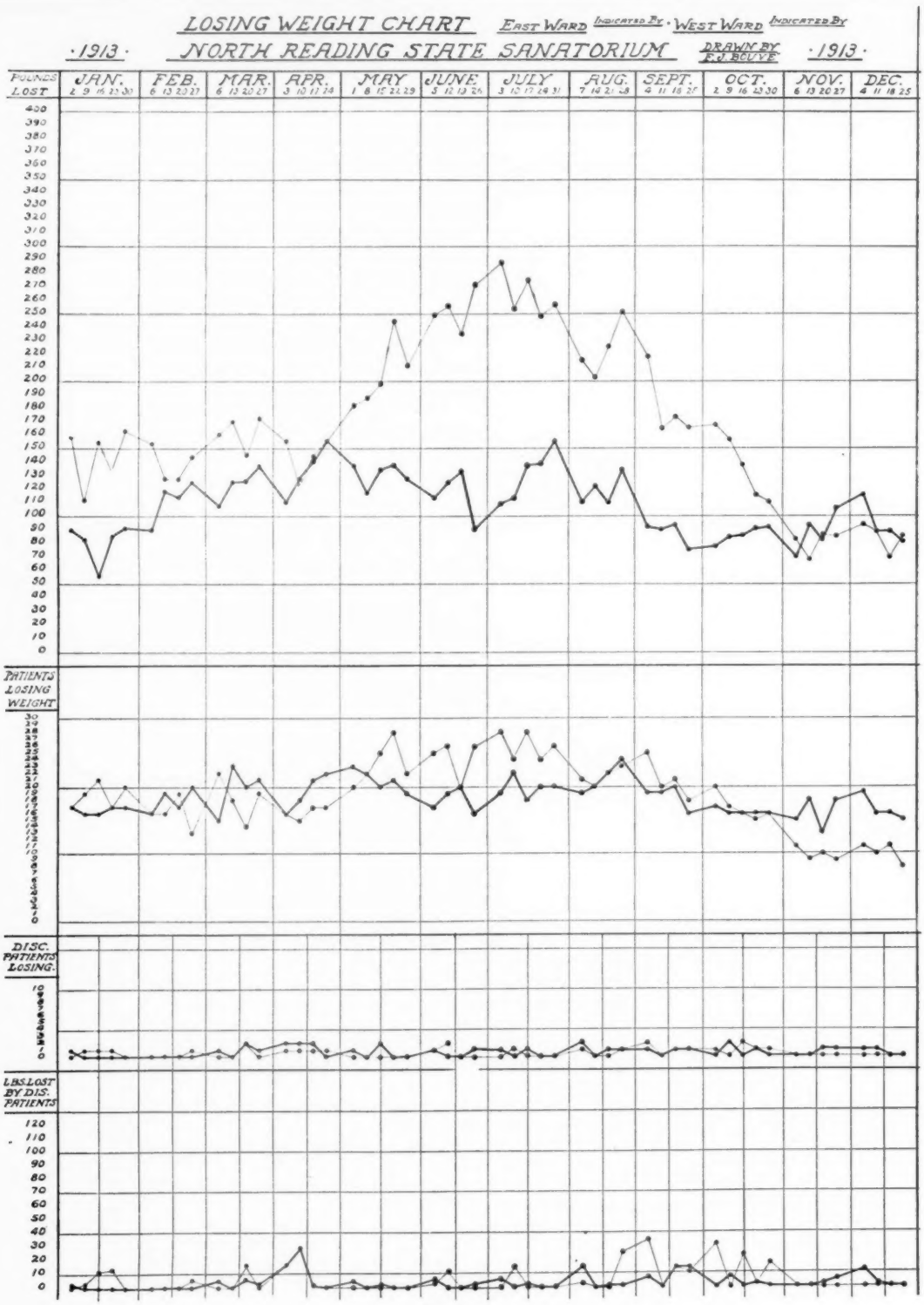

LOSING WEIGHT CHART EAST WARD INDICATED BY · WEST WARD INDICATED BY
·1913· NORTH READING STATE SANATORIUM DRAWN BY E.J. BOUTE ·1913·
POUNDS LOST
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.
PATIENTS LOSING WEIGHT
DISC. PATIENTS LOSING.
LBS. LOST BY DIS. PATIENTS

CHART NO. 3.

tative clinical reaction upon a group of approximately one hundred and eighty-five patients of which seventy-five per cent. are in the advanced stage. Whether there is a relation of cause and effect and if so how intense is the question at hand.

Reviewing the four charts which make up this series for the year the following observations can be made:

(1.) Barometer change seems to have very little affect upon the symptomatology. In a few instances hemorrhages have occurred following a fall in the barometer but in insufficient number of instances to justify constant relation. It is probably a matter of coincidence only in so far as barometer alone is concerned. There is a larger number of patients streaking in March, May and especially June than in

other months. Hemorrhage occurred more frequently in June than in any other month.

(2.) Relative humidity of high degree coincides with increased cough and chest discomfort, increased number of vesperal fevers, and increased number of bed patients.

(3.) Following weather relaxation and change from a protracted period of low glass reading wet and dry, together with high barometer, there seemed in several instances to be small epidemics of streaked sputum and occasional hemorrhages.

(4.) For seven different days in June the number of vesperal fevers rose to sixty-five and over, which is in excessive amount. Some reactions are not accompanied with humid weather. A plausible explanation is suggested, although the causative factor seems to lie outside the scope of this paper, in the fact that on several of these days visitors in large numbers, frequently over one hundred per day were visiting the patients, stirring them with family and other troubles, running over the grounds and making hard work and turmoil for all.

In this way of course there are factors not strictly meteorological which enter as a cause of variation among the indices on the plates presented. So it might be said that increased activity of patients encouraged by open weather in the spring time to walk further than they should cuts down the possible weight gain from the amount of the winter months when the heavy roads forbid extended walks. There are other reactions shown by the indices representing clinical symptoms but in a sporadic manner and apparently without definite relation to weather change. With two years' series of this sort before us more correlation may be seen.

Owing to the small lettering and complexity of these charts it is not at the present time practicable to have them reproduced among our published plates.

Many patients give a common history of onset of tuberculosis stating prodromal symptoms as in March, April and May followed by definite warning in the way of a hemorrhage or "pleurisy," "plural pneumonia," or "grippe" in June or July. This is particularly true of patients entering the sanatorium in the fall or winter months.

Accordingly, in view of the reactionary effect of the spring months upon the tuberculate it behooves one to be particularly critical of suspicious cases presenting themselves with perhaps vague signs but nevertheless real symptoms of pulmonary tuberculosis appearing in this unfavorable season.

REFERENCES.

[1] "Seasonal Variation of the Symptomatology of Pulmonary Tuberculosis," Boston Med. and Surg. Jour., March 20, 1913.
[2] "Elementary Meteorology," Ward.

Note.—One object in this investigation is to afford occupation of light and congenial nature for patients such as become unhappy when confronted with the enforced idleness involved in sanatorium residence.

This work meets the requirements for and represents the collaborative effort of about ten patients some of whom are now ex-patients.

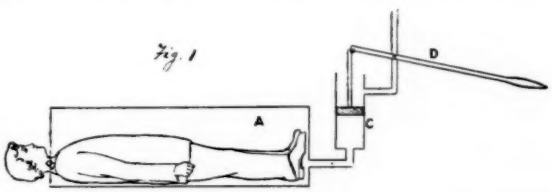
Mr. F. J. Bouvé, originator of the index drawings, was clearly helped in regaining health by the hearty interest he evinced for this work. Mr. Albert Young and Mr. C. W. Cushing have continued the drawings supplementing them with some added and excellent features. Misses N. Murphy, Florence Marsh, and Bessie Jean have collected much of the data on the women's wards. To these patients and to others who have helped I express my grateful appreciation for their earnest coöperation and faithful work.

N. B. B.

AN APPARATUS FOR USE IN OPERATIONS ON THE OPEN THORAX.

By Carl A. Ewald, M.D., Seattle, Wash.

It is the purpose of this communication to describe a mechanical principle in artificial respiration, which the writer believes has not thus far been made use of. It may have a practical application in surgery. A in Fig. 1 is an air-tight box, having at one end an opening B, lined with an inflatable rubber tube. C is a cylinder with a piston that can be raised and lowered by a handle D. A pipe connects C with A.



The subject is put inside, the head projecting through B. The lid is made tight and the tube about the neck inflated to make an air-tight joint. When the piston in C rises, a fixed amount of air which before filled A now fills both A and C. A fixed quantity of air which before occupied say 29,000 cu. inches now fills a space of say 30,000. The air pressure within has therefore, changed from 15 pounds to 29-30ths of 15, or 14½ pounds. When the handle is raised the air in C is forced back into A and the pressure restored.

The pressure within the lungs, however, always stays at approximately 15 pounds, because the lungs are open to the outside air through the trachea. When, therefore, the pressure in A is lowered, the chest expands, and air enters the lungs. When the piston descends, the air pressure in A returns to the normal, and the lungs become deflated through the elasticity of the chest walls and of the alveolar tissue. It is possible in this way to keep up an effective artificial respiration.

Before I had finished the construction of this apparatus, a further use of its principle suggested itself,—its possible value in operations on the open thorax. The most conspicuous apparatus in this field is Sauerbruch's Cabinet. In this a constant negative pressure is maintained outside the chest while the air in the lungs is in free communication with the out-

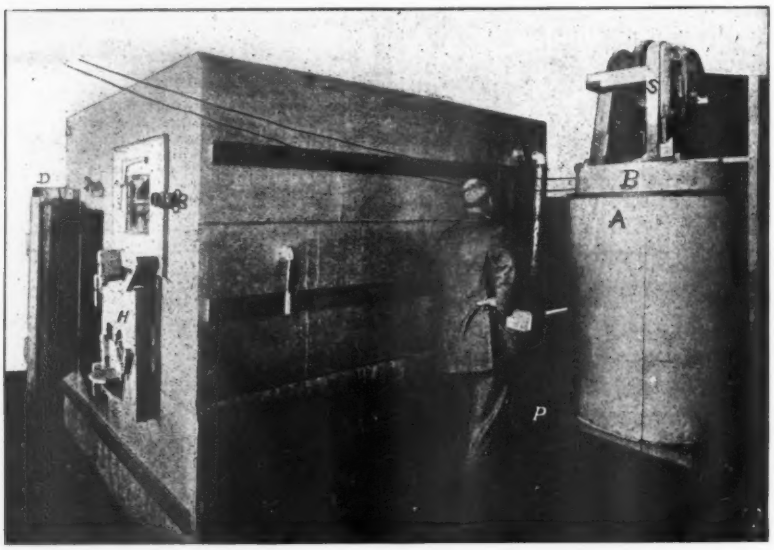


FIG. 2.

side air. The patient, however, must do his own breathing, and must do it not only with an injured chest-wall, but he must expire against a constant resistance. The muscular work instead of being directed to enlarging the chest, as in normal breathing, is done to deflate the chest, an act which in normal respiration is purely passive. These are reasons why Sauerbruch's device and the many modifications of it, including the various positive pressure cabinets, have not come into general use.

Other means have been devised to maintain respiration in the open thorax. Intratracheal insufflation is, perhaps, the most important. After reviewing them all, however, I still felt that the principle above described offered the best hope for a successful solution of the problem.

If we made our box large enough, with a pump correspondingly big, the subject with his head outside, could be made to breathe just as in the small box. The surgeon within would breathe the air of the closed cabinet. This I could show with my first apparatus,—a cabinet 6 ft. x 2½ x 1½. In the experiment I acted both as Versucher and Versuchsthier.

First I got inside the small cabinet with my head out, as in Fig. 1. When the pump was operated I could feel no change of pressure on my body, but my breathing was synchronous with the movements of the piston in spite of any moderate effort to the contrary. When I counted aloud and the piston went up, I missed a count or two until it descended.

I next closed the opening for the neck, got entirely inside, had the lid closed, and breathed the air within the box while the pressure was being changed from 15 to 14½ pounds some twenty times a minute. These pressure changes could not be detected so far as concerned my breathing. There was, however, a marked Politzer air-douche effect on my ear-drums, because obviously, the inner side of the tympanum does not feel the pressure changes as promptly as the outer side.

These two experiments showed: 1. That artificial respiration can be kept up effectively with such an apparatus allowing the anaesthetizer on the outside full access to the patient's head. 2. That the surgeon inside the cabinet feels no effect from the changing pressure except a somewhat disagreeable sensation in his ears.

I next built a cabinet 8¼ feet x 7 2/3 x 7 feet high, shown in Fig. 2. The frame was of fir scantling covered with one-inch boards and these covered with galvanized iron soldered at the joints. A window W, a door D, and an opening H for the neck, were provided and made tight with gaskets of rubber tubing. A U-tube partly filled with water recorded the pressure.

Instead of an iron pump, I used a better device,—a sheet iron cylinder B, 33 inches in diameter by 52 inches long, closed at the upper end, which moved vertically in another cylinder A, 36 inches in diameter by 48 inches high, filled with water to within 10 inches of the top. A 6 inch pipe P from the cabinet passed through the bottom of A to a height of 50 inches.

When the cabinet was closed and B then raised, part of the air in the cabinet passed into B and the pressure fell. When B descended the air within was forced back into the cabinet and the pressure restored. The work was done by a five horse-power induction motor. Three sets of iron gears reduced the speed from 1800 to 16 revolutions per minute. An iron crank 8½ inches long, carried at its end a loose iron block, which moved in a slot on the underside of a wooden lever 6½ feet long. One end of the lever was fixed. To the free end was fastened a leather strap S, which lifted B. When the crank turned the iron block mov-

ing in the slot, raised the free end of the lever 34½ inches. B returned by gravity and suction due to lessened pressure within.

A certain amount of leakage about the door and the opening for the head could not be prevented. This was found to be an advantage. The air that leaked into the cabinet when B was raised, would not all pass out again when B descended. After a few movements the pressure instead of being normal when B was down, became positive. As a positive pressure was not desired, a leather valve 5 inches square opening outward, was put in the top of the cabinet. Whatever air now leaked in was, most of it, forced out through the valve. The leakage lessened the efficiency of the apparatus somewhat, but it provided a change of air. It made unnecessary a device I had planned for filtering the air of carbon dioxide.

The volume of the air in the cabinet was 435 cu. ft. and of B above the water when up, about 17 cu. ft. We should therefore, have expected a maximum negative pressure of a little over a half pound per square inch, corresponding to about fourteen inches of water pressure. The greatest negative pressure obtained, however, was 10.2 inches. This was due 1. To the sucking in of the sides of the cabinet; 2. To leakage; 3. To friction of the air passing through the pipe. The six sides moved in a half inch at the centers when B was up. This decreased the volume of the cabinet over four cubic feet, and in effect reduced the volume of B by that amount. It accounted for most of the loss of efficiency.

The relative unimportance of the leaks was shown by opening three holes purposely left in the walls of the cabinet. A 1-inch opening reduced the negative pressure from 10.2 inches to 9.6. A 1½ inch opening reduced it to 9.3 inches. With two 1 inch and one 1½ inch openings, the negative pressure was 8.4 inches. With rigid construction, to avoid collapse of the sides, we could therefore leave an opening big enough to admit all the air needed by those inside the cabinet without greatly lessening the efficiency of our apparatus.

Experiments with this larger cabinet showed that it behaved exactly as the small one had. The subject with his head outside breathed synchronously with the movements of B, while those inside the cabinet felt nothing but a rhythmical pressure on the ear-drum and the bulging upward of the floor. Three or four persons could have remained inside for hours without difficulty of respiration. An opening that could be closed to any desired size, should be provided. This would serve primarily to regulate the negative pressure. Incidentally it would admit fresh air to those inside. A negative pressure which would be harmless to the lungs when the chest is closed, might be disastrous if applied directly to the lungs as when the chest is open. The difference of pressure which the unsupported lung tissue can safely bear must be determined by the surgeon and the opening then adjusted to limit the negative pressure in the cabinet to that amount.

Unfortunately, I was unable to do any experimental work on living animals. I secured, however, a dog at the City pound, that had just been killed by coal gas. I arranged the animal so the head was outside the cabinet and the body inside and opened the chest. The lungs were so contracted they had disappeared from view behind the engorged heart. When the motor was started the lungs were filled and deflated with perfect regularity.

From my work with this apparatus during the five weeks I had it in operation, I believe it offers a better means for the safe conduct of operations inside the open chest than any I have been able to find described. I hope it will be more fully tried out by others who have the facilities for carrying on work with living animals.

I shall note here some changes that experience has shown to be desirable:

1. The frame of the cabinet should be of fir or yellow pine 3 x 6 inches, 12 inches apart,—mine was 2 x 4, 16 inches apart.

2. Enclose with well dried 1¼ inch flooring with plenty of white lead and oil in each groove before tongue is fitted in. Give the whole two coats of paint. This will make an air-tight cabinet without use of a noisy iron covering.

3. Finish inside with ceiling or flooring nailed on diagonally to give added stiffness.

4. Size of cabinet about 11 feet x 12 x 7½ feet high.

5. Size of cylinder B for larger cabinet, 48 inches in diameter x 50 inches long, with vertical movement of 34 in. It should be of 16 gauge galvanized iron. Cylinder A should be 3 inches larger in diameter.

6. Size of pipe from cabinet 12 inches in diameter, 10 feet long, so machinery and cabinet can be put in separate rooms to avoid noise.

7. Pinion on motor shaft should be of rawhide to avoid noise. The other gears run slower and may be iron.

8. An opening in the side of cabinet 4 x 6 inches, which can be closed to any degree by a sliding plate operated from the outside or from within. This is to adjust the pressure and admit air for breathing.

9. A heavy plate glass top to admit light from above and allow spectators from suitably arranged seats, to watch operations.

The writer would be glad to give further details to any one desiring to carry on work in this field.

Scarlet-Fever in Cohasset.—Report from Cohasset, Mass., on March 29, states that scarlet-fever is at present epidemic in that town. Eight cases of the disease have been recently reported and the local schools are closed.

INSANITY IN CHINA.

BY ALFRED C. REED, M.D.,

Assistant Physician, Yale Hospital, Changsha, China.

THE question of the psychology, both normal and pathological, of the Oriental races, is of interest in two ways. It is of professional and scientific interest because it is such an untried field and offers so many alluring and wholly unknown lines of exploration. For the practice of medicine in the Orient there is imperative need of better understanding of these things not alone for the successful treatment of mental and many physical diseases but more particularly for their prevention. In the second place, the psychology of the Oriental races is of interest to the American physician because of the very practical and increasing relationship between the Orient and America, due to closer trade relations and the present tremendous awakening of Japan and China. The practice of medicine along western lines, and the introduction of modern scientific education and methods, are making rapid progress in Japan and increasingly so in China. The initial recognition of the Chinese republic by the United States has increased the Chinese regard for things American, and their desire for American customs and arts. American medicine now finds in China an opening never before presented. It will be to the advantage in a large degree of the medical profession of western countries, as well as to the great advantage of China if this opportunity is adequately met.

Aside from all these facts, the physician of all men can least afford to be provincial. Wide information must be his. Travel and knowledge gained from many lands are necessary to keep him broad-minded, energetic, sympathetic and a leader of men's thoughts.

China offers unusual opportunities for clinical and scientific investigation, and facilities are becoming available for such work. The results of such work will be applicable not only in China but also in western countries. Many problems are pressing for solution in the lines of public health and preventive medicine, clinical practice, surgery and the specialities, especially in diseases of the eye, skin and nervous system and in pediatrics. A problem can best be attacked however after it has been clearly defined. This is especially true in the realm of mental disease. If these facts hold in the United States, they are even truer in China. The pathological psychology of the Chinese is an unexplored field. There is practically no recognition or care of the insane from a public stand-point. Data are hard to get and of corresponding value when gotten. Here as in other lines, one of the primary needs in a medical way in China today is the need of statistics of incidence and local causes and characteristics of disease.

It is such considerations as these which lend special interest to a report[1] in the *China Medical Journal* by J. Allen Hoffman on patients discharged from the John G. Kerr Hospital for the Insane in Canton. Hoffman reports 312 cases discharged during the year 1912. Of these, 40% showed manic depressive insanity; 20% dementia praecox; 17.5% dementia paralytica; 3.5% exhaustive psychoses; 2% alcoholic insanities; 1.5% involutional psychoses, and the remainder scattered.

The manic depressive group showed the same preponderance of females over males which is found elsewhere. The average age of this group was 28 years, which also corresponds to figures in the United States. This was the largest group and showed the widest range of ages, from 15 to 62. Of the 125 manic-depressives, 22 showed paternal hereditary taint, 11 maternal and 4 collateral taint, a total of 30%, but more than half of the group were received through the police and no history could be obtained. Here too must be reckoned the fact that the maternal family history is often unknown. A complete record therefore would probably show the same degree of hereditary predisposition as in the United States. Among the vicious habits of the parents of these cases opium addiction and alcoholism were more common than in any other group. Venereal disease in the parents was rare. Manic depressive insanity often seemed to follow some season of festivity and drinking, and was especially common after the Chinese New Year. 28% of these cases gave a history of previous attacks. The results of treatment were not different from those at home. 61% were discharged cured, 24% improved, 8% not improved and 6% died.

As in the United States, dementia praecox is of frequent occurrence, forming 20% of Hoffman's cases. In this group there were over four times as many males as females. The average age of onset was 18, the actual time varying from 15 to 24 years. The hebephrenic type was most frequent and usually appeared in young men of the better class families socially. The paranoid type was less frequent and appeared at a somewhat greater age. Hereditary predisposition seems to be the great causal factor in South China. Opium addiction and alcoholism were of frequent occurrence in the fathers of these cases, and seemed to have a special influence in favoring mental weakness in the children. In many of these cases the exciting cause of the disease was in some way associated with the sexual life of the individual. Hoffman notes the fact that a surprisingly large number of cases of dementia praecox which in the United States are adjudged hopeless outside of an institution, in China are able to make a livelihood and return

[1] Hoffman, J. Allen: A Report of Patients Discharged from the John G. Kerr Hospital for Insane During 1912. China Medical Journal, November, 1913, p. 369.

to their homes. The easy-going leisurely pace of ordinary Oriental life is responsible for this, as is also the absence of the mental stress, competition and hurry of America. We see here a practical illustration of the mental results of the two environments.

Of Hoffman's cases, the third largest group was dementia paralytica, and in this group were four times as many men as women. While syphilis is wide-spread in China, the strange fact remains that dementia paralytica and other para-syphilitic affections are rare. In explanation of the high percentage of this disease at the John G. Kerr Hospital, Hoffman states that these cases were largely among persons who had travelled outside of China, some as coolies, some as merchants. They had been subjected to various hard-ships at sea, and were addicted to venereal excesses as well as to alcoholism or opium. All who could give a history, had contracted syphilis abroad, especially in Macao, the Malay states, Borneo, the Philippines and North and South America. Among the southern Chinese who have never left their own country, paresis is uncommon. The author points out that it is a subject demanding investigation as to whether syphilis alone is responsible for dementia paralytica, or whether other factors such as debauched living and the stress of the competitive western life enter in also. Or the syphilis of the Orient may be caused by a spirochaete of a different strain which does not tend to produce para-syphilitic affections.

Of the eleven cases of exhaustion psychoses, nine were in men and only two in women, just reversing western statistics, but explained by the shock of fear and exposure during the war of rebellion of that year. Alcoholic psychoses ranked fifth in number, though Hoffman considers them to be increasing. In five years in China, he has seen but one case of delirium tremens.

The opium habit was responsible for very few of this series of cases, but Hoffman reports having found whole families of children who were imbeciles, idiots, or dements, and in whose history the only causal factor apparently was opium addiction in the father.

The conclusion is reached that insanity is as common, if not in fact more common in South China than in the west. One strong contributory factor to this condition of affairs, is the custom of ancestor worship which demands that every male must have off-spring. Even demented persons are at times taken out of hospital that they may marry and beget children. Naturally this results in a greater increase of mental disease among the wealthier and better classes than among the poor who often can not afford to marry.

Three facts deserve special mention in a consideration of the prevalence and varieties of mental disease in China. Both are substantiated by the witness of many observers. The first is the absence to a great degree of alcoholism as a common vice except in the coast-wise cities. This largely removes the influence of alcohol as a hereditary factor in the development of mental disease, and in the production of mental defectiveness. At the great festival of the Chinese New Year, over-indulgence in alcoholic beverages is more common as it is also on other gala occasions. But as a chronic common vice, it has nothing like the prevalence found in western countries. The second fact is the frequency of syphilis in the primary, secondary and tertiary stages and the extreme infrequency of para-syphilitic conditions. It is a matter of clinical observation that arterio-sclerosis and thickening of the arteries is excessively common. Aneurysm however is rarely seen. Hemiplegia from embolism or thrombosis is frequent while tabes and paralytic dementia are quite unusual.

The third fact of special interest is that while conditions of heredity, opiumism and alcoholism, the latter chiefly in the coast cities, favor the development and increase of mental disease and defect, and while these diseases are probably as frequent in China as in America, nevertheless the lack of the stress and strain of life in America makes the results of such disease in many cases far less serious than the results of similar conditions in America. It is easier for the weakened mentality to take care of itself and be independent in China because of the machine-like routine of the ordinary life of the people and their freedom from exciting and disconcerting agencies of various sorts which in other countries are all too common. It must be noted too that there is more than a little truth in the often made observation that the Chinese differ in their nervous make-up from Occidental races. They often seem indeed to be devoid of nerves and utterly unaffected by and oblivious to, many things which a western man finds not only irritating but really unbearable. This placid disregard for things we usually associate with "nerves" must have a more or less important bearing on the development of latent causes of insanity. At present it is impossible to estimate this influence, but it is very real and ought to be an able adjunct if properly used, for the prevention of functional insanities whose out-break depends on some exciting cause in the immediate environment of the patient.

The student of heredity finds a rich field in China where genealogies are so carefully preserved. Many old families appear to be dying out, their energies and vigor dissipated, and some of the reasons lie close at hand. Too close inbreeding is not a factor, because of the deep repugnance and even prohibition of marriage between persons even distantly related. Usually the same surname, even where no blood relationship exists, serves to prevent marriage. But on the other hand, every male is virtually forced to have off-spring and the belief is well-nigh universal that daily sexual intercourse is

necessary for health. The debilitating effect of this and the gross moral tone of the people as a whole, has much weight in the perpetuation of poor and defective stock. Coupled with this is the fact that tuberculosis in every form is rampant and that venereal disease is rapidly increasing. It is evident that the percentage of mental defectives and insane would reasonably be high.

Under the new government, republican in name at least, China has great possibilities. Not the least of the necessities for her advance, is the development of public health work and the investigation of her great medical problems. If western nations like America are only now just awakening to the close relation between economic efficiency and public health, it is small cause for wonder that China with her inherent belief that human life is her cheapest commodity, should not yet have appreciated such a relation. The near future however promises to show a great advance both in the popular recognition of such things by the Chinese, and also in active measures to remedy existing conditions.

EDUCATIONAL STANDARDS FOR NURSES. STATE REGISTRATION AND TRAINING SCHOOL INSPECTION.

BY SARA E. PARSONS, R.N.,

Superintendent of Nurses, Massachusetts General Hospital.

UNDOUBTEDLY the standards for nursing education set by the American Red Cross is the most important fact in the nursing field today. All nurses with a spark of patriotism desire to be enrolled for the service of their country in time of war or calamity. Any school that would have the future welfare of the country at heart must desire to equip its pupils to meet the national standards. The school that pursues any other policy is, in my opinion, pursuing a suicidal course.

No one but a reliable woman with good moral standards and a complete all around training ought to be enrolled for active service, as no one can predict what phase of illness a nurse must deal with in Red Cross emergencies. The War Relief Board of the American Red Cross has created a national committee of fifteen to establish a uniform standard of qualifications to govern the enrollment of nurses. The committee in full is as follows: Jane A. Delano, R. N., Chairman; Mabel T. Boardman; Mrs. William K. Draper; Major R. W. Patterson; Dr. T. W. Richards; Dr. William Welch; Mrs. Frederick Tice; Emma M. Nichols, R. N., (City Hospital, Boston); Alma E. Wrigley; Mrs. Whitelaw Reid; Anna C. Maxwell, R. N., Isabel McIsaac, R. N., and Julia C. Stimson, R. N.

What are the requirements, and are they just?

TRAINING. The nurse must have had at least a two-years course of training received in a general hospital which includes the care of men and has an average of at least fifty patients during the applicant's training. In cases where subsequent hospital experience, or a post-graduate course would seem to supply any deficiency of training, applicants may be enrolled with the approval of the National Committee.

Graduates of State Hospitals for the Insane are not eligible unless their experience includes at least nine months training in a general hospital either during their course of training or subsequent thereto. In states where registration is required by law graduates of schools not meeting the requirements of the State Board of Registration will not be considered eligible for enrollment. Applicants must have the endorsement of the American Nurses' Association and of the Training School from which they graduated.

They must be at least twenty-five years of age.

It will be noted that an applicant may make up her deficiencies by post-graduate work so that these standards cannot be said to be unreasonable.

In view of the general ethical reasons why nurses should be adequately prepared for the profession they voluntarily assume, is there any just objection to an inspection of training schools by some properly qualified person appointed for that duty by the State Board of Nurse Examiners?

Is there any good reason why such an inspector should not be selected from nurses who meet at least the minimum standards set by the National Committee?

Is there any logical reason why hospitals that undertake to run training schools should not stand in the community for what they really are?

If they wish to meet national standards why should they not affiliate to make up their deficiencies as most recognized schools today are obliged to do?

Some of the largest and best-known schools in Boston are dependent upon smaller and special institutions to give their pupils experience which their own wards cannot supply. The Boston City Hospital, the Massachusetts General and the Peter Bent Brigham are good examples of the large hospitals that affiliate, and the Children's Hospital and the Adams Nervine are notable examples of what small special hospitals can do for their schools when determined to meet definite standards.

It is both difficult and expensive to maintain a good training school, but most hospitals find that it pays in results.

New York hospitals that wish to maintain training schools eligible for registration with the Board of Regents must give at least a two years course in a hospital or hospitals giving definite kinds of experience, and the schools must submit to the Regents papers to show that applicants have had at least one year in high school *or an equivalent* before entering the school. It is this last requirement that seemed to cause so much controversy between medical superintendents of hospitals and the nurses who stand almost unanimously for such standardization, (although they would prefer higher standards and intend to raise the educational requirements.) Women with less education than that must make up their deficiencies if they wish to care for the sick in New York as registered nurses.

To train, graduate and register women of such a low standard as a grammar school education implies an imposition on the public (that eventually pays for it in dollars) that is not to be endured.

The position of nurses as a body who are insisting on better education and better opportunities needs no defense in the mind of any thoughtful man or woman, but the plea made by a few who are loud in their cry for no restrictions on those who go into the hospitals and homes to nurse the sick is sometimes so plausible as to persuade those who do not carefully think out the whole situation.

Opposed to the names of men who are quoted as objecting to state registration for nurses; for training school inspection, etc., there are hundreds of notable men and women who endorse the movement.

May I quote from a letter recently sent me by a hospital trustee of another state who has recently become interested in the nurses educational movement—

"Small hospitals with training schools that are designed by Boards of Trustees for utilitarian purposes have much to answer for. Too many training schools are issuing diplomas that in substance certify to residence for a continuous term of months at some hospital where the holder has been a very satisfactory maid of all work.

"The laymen, who constitute the governing boards of hospitals that maintain training schools, have not been impressed with the moral obligations they assumed when inviting a young woman to enter the training school. The uppermost thought has been that it was an inexpensive and accepted method of paying for the care of sick people dependent on charity.

"Much good can be accomplished if an organized educational campaign could be conducted in the ranks of the laymen who govern the hospitals. Thousands of these well intentioned conscientious men are big in their business world but small in the knowledge that covers the subject of nursing education. I have been in hospital work very actively for twelve years and when I think of the utter ignorance of nursing education that blinded me for nine years I wonder what use I made of my eyes and ears.

"In detail this letter may not interest you, but its chief point is that you can readily see that an officer of an obscure country hospital has been awakened by the echo of the gospel that earnest women of the nursing world have been preaching."

The above letter speaks for itself. There is at present in Boston a progressive, humanitarian movement on foot to provide nursing and household care for people of moderate means, (Household Service Bureaus.) The Women's Municipal League is behind it, and a committee of its members, doctors and nurses are framing a curriculum, and searching for hospitals where attendants may be taught to do this much needed work. Such attendants may be of untold service in the community if provision is made so that the general public may readily distinguish between the trained registered nurse, and the attendant.

For the success of this project which is one of the most important social movements of the present day it is important that the State Board of Nurse Examiners be empowered to inspect training schools so that the registered nurse of the future in Massachusetts may stand before the public as one who has had sufficient practice and theory to warrant confidence when people wish to employ a trained nurse.

The attendant should also meet certain definite standards and be licensed or registered to practice. She will not take the place of the trained nurse any more than the trained nurse takes the place of the doctor but she will supplement the work of both.

In hospitals where the problem of training nurses for registration is too difficult we should find the laboratory for the training of attendants.

All persons who are interested in the 90% of the population who most need consideration will, it is hoped, help the trained nurses and the Board of Nurse Examiners to get their training school inspector, and also support the effort to provide the community with trained attendants.

Hospital Bequest.—Under the will of the late Frederick Townsend Martin of New York $5,000 is left to the Albany Hospital, Albany, N. Y., to endow a bed in memory of his mother.

Cases of Infectious Diseases reported to the Boston Board of Health for the week ending March 31, 1914: Diphtheria 46, of which 4 were non-residents; scarlatina, 130, of which 13 were non-residents; typhoid fever, 3; measles, 92, of which 1 was non-resident; tuberculosis, 50.

Clinical Department.

TREATMENT OF HEMORRHAGIC DISEASES.

BY H. GILDERSLEEVE JARVIS, M.D., HARTFORD, CONN.

Assistant Surgeon to the Hartford Hospital.

IN past years little progress has been made with the problems of the etiology and the treatment of hemorrhagic diseases. The etiology still remains an obscure subject, as two diametrical opposite opinions are held as to its cause:

1. That an abnormal vessel wall allows normal blood to escape through it.
2. Abnormal blood because of its abnormality is able to pass through a normal vessel wall.

The arguments in favor of either supposition are not as yet convincing, although the preponderance of evidence seems to be in favor of the latter view; that something which causes the blood to coagulate is missing. In the cases tested there seems to be a diminution in the number of platelets, and in the first case we were able to foretell an outbreak of purpura by the diminution of platelets. The coagulation time has been quite variable, 3-10 minutes up to 40 seconds in cases which seemed to be clinically the same.

The mortality was quite high when the older methods of treatment were in vogue. The combined statistics of Schloss, Commiskey, Vassmer and Shukowsky show a mortality of 50.3%. According to Vincent, taking all forms of the disease, probably 60% represents the average mortality.

The older methods consisted of the use of various therapeutic agents, *i.e.*, adrenalin, calcium chloride and lactate, tannic acid preparations, ferric preparations and gelatin. These agents were on the whole quite disappointing, although gelatin has been highly recommended by German writers and has been widely used in Europe. Vassmer reports 34 cases of melena neonatorum treated with gelatin, with a mortality of 8.8%.

NEWER METHODS OF TREATMENT.

The method of blood transfusion was introduced and was employed by Lambert, Carrell and Brewer in 1909. Lespinasse and Fischer in 1911, with their own cases and others, collected in the literature, reported a total of six cases with a mortality of 33 1-3%. Vincent, in 1912, reported 11 cases, 8 of which were successful. Bernheim had one successful case. He devised two metal tubes, one of which is inserted into the vein of the recipient and the other into the artery of the donor. When both are in place they are united. This method and that of Vincent with the glass tubes, makes the technic easier because it allows more room between the two patients. Vincent has made one improvement over the technic of others in the use of the external jugular vein, as it is the largest of the superficial veins in the baby.

There were also various modifications of the direct transfusion method as practiced by Kimpton, Lindeman and Vaughn.

A second treatment that came into vogue was the injection of animal serum. This was first suggested by the work of Weil on hemophilia. The serum was generally obtained either from a horse or a rabbit. The amount used was 10 c.c. up to as high as 100 c.c. at a time and repeated. Leary, Bigelow and others used it with fair success. This treatment was not confined to the hemorrhagic diseases of children, but was utilized in various conditions, such as tonsillar hemorrhage, uncontrollable bleeding from jaundice, hematemesis and even hemoptysis.

The third method was the use of human instead of other varieties of serum. Welch, in the *American Journal of Medical Science* for 1910, first brought out this idea. He reported 13 cases, all of which he cured this way. Last year he reported 32 cases; some of which were hemorrhagic cases, others were just septic, in which he used normal blood serum with what he called brilliant results. He gives no detail report of the cases nor of the per cent. cured. In conclusion he states, "Of other conditions in which I have had experience in the use of human serum, the various bleeding conditions rank first, and of these, more especially the hemorrhagic condition of the new born."

In considering the use of sera or blood transfusion, four points were impressed upon me:

1. Dexterity required as in a transfusion. Men have to be specially trained in the surgery of blood vessels to do this.
2. Danger, as from thrombosis.
3. How did we know that just the elements of the serum were missing?
4. Various articles are necessary to do a transfusion or even in the use of sera.

METHOD EMPLOYED.

To obviate the drawbacks mentioned above, I have employed the so-called injection of whole human blood. Schloss and Commiskey, in two articles during 1911-1912, reported nine cases with a cure of seven. Myers, of Wisconsin, had two cured cases. I took up this method about two years ago, starting in the pediatrical clinic of the Hartford Hospital, and up to date have had thirteen cases.

Of all the methods which have been advocated in the treatment of hemorrhagic diseases, this one is by far the simplest. The only apparatus needed is a syringe, needle and a piece of strong flexible rubber. The latter is not absolutely necessary. The syringe should hold at least 10 c.c., preferable 20 c.c. of fluid. Those made

entirely of glass are better because in these the blood is less likely to clot. The needle which has given the best results is a medium size aspirating needle. The piece of rubber joins the needle to the syrings and allows play between them, so that if the child squirms around, the needle is less likely to break off or injure the child.

The areas from which the blood is taken and where it is injected, must first be carefully sterilized. The blood is drawn from the basilic vein at the elbow, preferably from the father or some male relative, although on several occasions it has been taken from the mother as she lay in bed. It is then injected into the buttocks or back of the infant. The amount used is from 10 to 20 c.c., and is to be repeated in 4 to 6 hours if the hemorrhage is severe or if there are any signs of new bleeding. I always repeat it if purpura is present.

I will now briefly cite my thirteen cases:

Case 1. A. R. Admitted to Hartford Hospital on October 8, 1911.

Complaint. Swollen face and loose bowels.

June 1, 1912. A summary of this case shows numerous attacks of purpura, a continued emaciated condition complicated by pneumonia, double otitis media, perineal abscess, varying periods of general edema, rhinitis and at times the child has been in a critical condition.

Because of his hemorrhagic condition, 20 cc. of father's whole blood were injected into the patient's buttocks.

June 17. Because of another slight outbreak of purpura, 20 cc. more of father's blood were injected.

July 1. Child has gained steadily in all respects, but because of one small purpuric spot on the right thigh, 20 cc. of blood were again injected.

August 15. No more purpuric outbreaks, child has gained steadily, is able to walk and was discharged well.

Case 2. C. P. Age 4. Came to my office for severe nosebleeds and spots over body. For two and one-half years has been subject to outbreaks of purpura and severe nosebleeds. This has been getting worse and last week the patient had an outbreak every day. Mother states that the bleeding is so severe that the child faints. On examination no ulcer was found in the nose, but the child was very anemic and purpuric spots were present on the left thigh and right leg.

15 cc. of father's blood were injected. Bleeding stopped immediately. In a week, two drops appeared at the nostril. 15 cc. of father's blood were again injected.

Feb. 15, 1913. Child was lost sight of. Since last note, the child has had one attack of nosebleed, but the father refused to have it treated any more.

Case 3. Baby Oliver, 6 weeks of age. For past three weeks has had bleeding from nose, gums and rectum. During the past two days, there has been bleeding from the cord and into the brain and orbital cavities. Examination shows a comatose child, fontanelles very tense, marked protrusion of right eye ball and bleeding from gums, navel, nose and rectum. Purpuric spots over rectum, thighs and upper extremities. Child practically moribund. Twenty cc. of father's blood were injected. Child died in four hours.

Case 4. Mary R., 3 weeks old. Came to my office Sept. 1, 1912.

Complaint. Bleeding. Mother stated that the child had bloody stools for about three days. On examining child, it had a rather free discharge of bright blood from the rectum. The rest of the examination was negative except for anemia. Hemoglobin 65 per cent. Coagulation time, 10 minutes.

Twenty cc. of mother's blood were injected into child's buttocks.

Child made an immediate recovery, gained steadily in weight and never had any more bleeding.

Case 5. Lillian W. Entered Hartford Hospital on November 22, 1912. Age 2 months. Past history negative.

P. I. One week ago baby began vomiting after feeding, sometimes curds and at other times liquids. Baby has been nursed every time she cried, either from breast or Eagle Brand Condensed Milk. Bowels irregular, at times 2 to 5 movements a day, green, watery, with some curds and mucus. Child has lost about one and one-half pounds since birth.

Examination. Crusts on scalp. Pharynx, chest and abdomen negative. Small umbilical hernia, recents loss of weight, skin clear.

Nov. 26, 1912. This infant has not been doing well. At first, while it took its feedings yesterday it had renewed vomiting and whereas there were noticed some bright blood clots in the stools on the 23d; to-day there is considerable bright blood in the faecal discharge and the child's general state is much depressed. Rectal examination, including an abdominal palpation, fails to reveal any cause for bleeding.

Ten cc. of father's blood were injected into child's back. Bleeding was immediately controlled.

Jan. 4, 1913. There has been no further bleeding and the infant has continued to improve and has gained two and one-half pounds. It is now on a milk formula and with the exception of slight eczema of the right ear, creases in neck and groin, there are no further abnormal developments.

Case 6. Baby B., 3 days old. Seen in Wallingford, Conn.

No bleeders in family. On second day after birth, diapers were red and again on that night there was slight bleeding from one nostril. No other foci of hemorrhage.

Examination. Well developed child. Blood clot in left ear and right nostril. Active bleeding from vagina and navel. Slight purpuric hue to entire skin.

Eighteen cc. of whole blood from paternal uncle were injected into child's buttocks. Blood was taken from the uncle because the father had been in poor condition. Bleeding immediately stopped and child has had no recurrence.

Case 7. Peter F. Admitted to Hartford Hospital on Feb. 23, 1913.

Complaint. Hemorrhages from nose.

Born November 16, 1912, full term, normal delivery. Weight, 9 pounds. Always breast-fed. Always well until present illness. Three days ago child had nosebleed from left side. Some was swallowed and a clot 1½ in. x ½ in. was vomited, also some very dark vomitus. Black stools for two days,

but no more vomiting. Stools were better yesterday and to-day, O.K. (yellow). Child did not nurse well this morning.

Father living (recovering from an operation). Mother living and well. No bleeders. One other child, O. K.

Feb. 23, 1913. Eight c.c. of serum from mother injected into child's buttocks.

Feb. 24. This infant is in a precarious state, somewhat stupid, right external strabismus. Tense fontanelle, peculiar pallor, semi-tonic state. Throat, chest and abdomen negative. There are no purpuric spots present, although on the right knee the skin is a little dusky.

Feb. 24, 5 p.m. Because of the precarious condition and duskiness of skin, 10 c.c. of whole blood from father were injected into the buttocks of the child.

Feb. 25. There is a slight increase in the intercranial pressure this morning. Fontanelle more tense. Eyes held in a staring, inattentive gaze, and except when the child is aroused, it remains in a semi-conscious state in which the eyes are partly open. There still remains the tonic state of the musculature. On the other hand, a stool just passed contains no blood.

Feb. 26. There has been no further evidence of hemorrhage. The fontanelle is the same as yesterday. The tonicity is a little less and the child responds to external stimuli; but when left, it returns to its semi-stupid condition in which the eyes still tend to be fixed, but less so than formerly.

March 1. The baby is less stupid today. Its pupils respond readily. There is still a little internal strabismus. The neck is a little stiff and the fontanelle tense, but less so than yesterday.

March 16. The improvement has been very rapid and satisfactory and today there is no evidence of intracranial pressure. Child is clear in its mind and improved in nutrition. It is on a milk formula supplemented by breast feedings. General physical examination negative.

CASE 8. Joseph P. Admitted to Hartford Hospital on March 20, 1913. Age 20 months.

Complaint. Severe epistaxis on March 17, 18 and 20.

Family History. Father and mother well. No other children. Mother 22½ years old; has had considerable epistaxis during the hot weather for the past few years, but not as a child. No known tendency to hemorrhage on maternal or paternal side of family.

Past History. Child born at full term, normal labor, well developed. Breast fed for 14 months. Since then it gets "everything." Bowels move normally, stools are soft, yellow, no curds. No vomiting except when taking breast feedings too quickly in early infancy. Always well up to present illness.

Present Illness. March 17, at 4.30 p.m., while in mother's arms, child's nose began bleeding quite profusely, lasting 55 minutes. Stopped by cold water compresses on neck.

March 18 at 2 a.m., began to bleed profusely from nose. Mother could not stop the hemorrhage and a doctor was called. The hemorrhage continued intermittently until 1 p.m. Baby then looked weak and pale.

March 20, at 2 a.m. began to bleed again and lasted until 6 a.m., stopped spontaneously. Two dark, bloody stools. Question of bloood from right ear today (March 20).

This infant presents three prominent symptoms: First, as regards it skin; it is unduly pale and the child's face, particularly the upper lip, is puffy. There are purpuric areas on the lower extremities from the knee down.

Secondly, there is evidence of recent hemorrhage from the left nostril. On the other hand, the post-pharyngeal examination reveals no blood. Thirdly, the child presents a peculiar, weak and dyspneic condition, there being no chest findings to account for it. In addition, it has a slight cough. Throat, chest and abdomen negative. Phimosis present. Child tends to lie in an exhausted and semi-stuporous condition after having been examined.

March 20, at 2 p.m., 19 c.c. of father's blood were injected into child's left buttock.

March 20, at 8 p.m., 25 c.c. of father's blood were injected into right lower back.

March 21. Small petechiae are present on legs and feet and a few on the forearms. The area over the right knee is increased and a new one has appeared over the left ilium. Generally the boy is better. The breathing is less labored, although abnormal still, and the child is a little brighter.

March 21, at 2.15 p.m., 20 c.c. of father's blood were injected into right buttock.

March 21, at 8 p.m., 20 c.c. of father's blood injected into back.

March 31. Purpuric condition has entirely cleared up.

CASE 9. S. A. G. Seen March 20, 1913. Three days old. Day after birth a right-sided cephalohematoma was noticed and dark blood in mouth, and there began to slowly appear purpuric spots over the backs of the hands and both lower legs. Forty-eight hours after birth, the child vomited dark blood, and stools looked darker than normal. Examination shows a moderate sized right sided cephalohematoma, purpuric spots on back of left hand, over both lower legs and right shoulder. Ten c.c. of whole blood from father were injected into the child. Child had a very dark stool while this was being done. Next day it appeared quite well, nursed well and stools were normal. Because of a new spot, 10 c.c. of whole blood again injected. Not seen the next day.

March 26. Child again seen. Very stupid and refuses to nurse. Several new spots have appeared. Ten c.c. of blood again injected.

Child gradually failed and died the next day. (Attending physician's note.)

CASE 10. July 15, 1913. R. T., 7 weeks old. Poorly nourished. Vomited almost everything for about four days. During last two days purpuric spots have appeared over abdomen and bright blood has been passed per rectum. Twenty c.c. of whole blood taken from a nurse and injected into child's buttocks.

July 22. Bleeding has stopped and child is gaining weight on a milk formula.

CASE 11. Seen at St. Francis' Hospital, Sept. 14, 1913. Three days old. Bleeding from ears, mouth and nose. Forceps case. At first it was thought that the bleeding was due to this, but when I saw the case, the bleeding was from other places. Child was in a very critical condition.

Twenty c.c. of father's blood injected into child's thigh. Child grew steadily worse and died in two hours.

CASE 12. Mrs. W. W. C. Age 38. Two months pregnant. Because of poor physical condition it was deemed necessary to abort. This was done. She bled profusely, and inside of four days was packed and repacked eleven times, with no apparent good result. At this point 20 c.c. of her husband's blood were injected into her buttocks. In two hours the packing was removed with no bleeding. She has not bled since then.

CASE 13. December 24, 1913. R. P. Age 8 days. Three days ago, impetigo began to appear over body and there was bleeding from the rectum, navel and left ear. Bleeding had been increasing and because of this, 20 c.c. of the father's blood were injected into the child's buttocks.

Dec. 25. All bleeding had stopped, except a little from the rectum.

Jan. 1, 1914. No more bleeding, impetigo better.

MORTALITY.

In this series of 13 cases which have just been reported, there were 3 deaths, or a mortality of 23%. If we take the combined statistics in the literature of the cases so far reported, that have been treated by this method, we find that there were 5 deaths in 24 cases, making a mortality of 21%. The four cases reported by Vincent are not included, because as he states, "I did not use the method as recommended, and consequently these cases are not a fair test."

The transfusion method, taking the combined statistics of Lambert, Carrell, Brewer, Bernheim and Vincent, shows a mortality of 29%.

The mortality of cases in which human sera were used cannot be given exactly, because the writers on this subject did not give their cases in detail.

If recognized and treated, these cases do not, as a rule, die from the loss of blood, but from the mechanical effect of the hemorrhage into some vital organ. In concluding, I would like to impress upon your minds the following three salient facts in favor of the injection of whole human blood in the treatment of hemorrhagic diseases:—

1. Simplicity of employment.
2. Efficaciousness.
3. Lack of danger to either recipient or donor.

So it seems to me that we now have within the scope of every practitioner, a method to combat more successfully this heretofore rather fatal disease.

In conclusion, I wish to thank those doctors who permitted me to see some of these cases and especially Dr. Charles A. Goodrich for his helpful aid and suggestions.

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A CASE OF FRACTURE OF THE CARPAL CUNEIFORM BONE.

BY WM. PEARCE COUES, M.D., BOSTON.

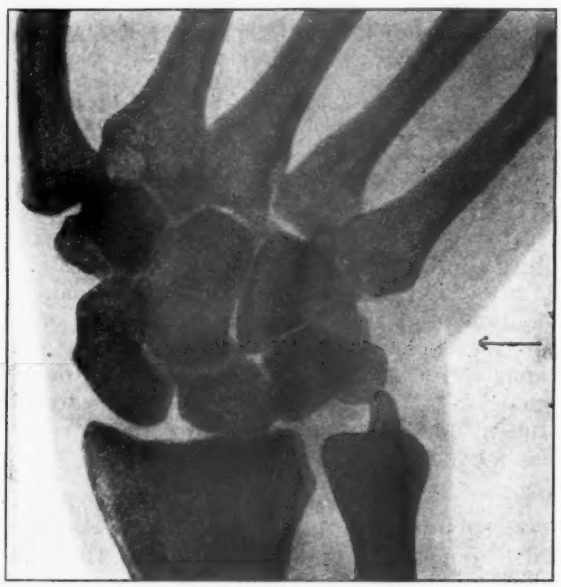
Isolated fracture of the carpal cuneiform is of extremely rare occurrence. The special fracture text books make mention of the possibility of its occurrence without citing cases as a rule; and general surgical works make no mention of it in their pages. Fracture of the carpal scaphoid and dislocation of the semilunar quite naturally, on account of the frequency of these injuries, have been carefully studied and described even since the advent of the x-ray.

History of Case: Miss F. L., 23 years, was seen Nov. 11, 1913. The history was as follows: While doing gymnasium work, she met with the injury which we describe.

Aug. 16, 1913, while standing on the hands she turned too far, lost her balance, fell to the ground, rolled over on her left hand. The hand was flat, extended on the ground. Immediate pain was felt in the wrist and she was unable to use the hand afterward. She says she felt crepitus at this time. The next day the hand was very lame and there was ecchymosis over the dorsum of the hand, which lasted a week or more. Monday, she consulted a physician who thought there was no fracture. The hand was bandaged and liniment prescribed. Ever since then there has been disability, felt most in rotation of the wrist or extension of the hand. Pain on extension is most marked over the second metacarpal. The pain was constant at first; then only when attempting to do her work, but there has been no time when she has been able to do her gymnasium work without pain. Of late, numbness of the hand and arm was felt.

Examination. Well-developed, active, rather slight young woman. Examination of the wrist

Fracture of Carpal Cuneiform.
November, 1913.



Fracture of Carpal Cuneiform.
January, 1914.

showed the following: There was no obvious swelling or ecchymosis noted in the region of the cuneiform. Flexion and extension of the wrist is slightly painful in the region of the cueiform bone. There is very slight pain in adduction of the wrist; in active abduction there is more pain. Forced passive abduction of the wrist causes great pain in the region of the cuneiform. Flexion and extension of the fingers is not painful. Rotation of the forearm causes pain in the wrist in the region of the cuneiform and slightly lower. There is a very slight synovitis of the middle extensor tendon, showing at the middle of the back of the hand. When the patient picks up a weight or turns a door knob the pain is felt in the wrist in the cuneiform region. Direct pressure over the cuneiform is very painful; but no crepitus is elicited. Lateral pressure across the wrist in such a manner as to make the pisiform press upon the cuneiform bone, causes much pain. The x-ray showed a fracture of the carpal cuneiform incomplete, running from the ulna side about half way across the bone obliquely. Hand immobilized on palmar splint with pad and strapping over the cuneiform. There was considerable relief experienced after the hand had been immoblized for a few days; and from this time, there was progressive improvement which, however, was slow. Two weeks after the first radiograph, a second was taken which showed no union of the crack. Another radiograph was taken in another two weeks, after fixation for about one month, which still showed no bony union; though the pain and disability were much less. The next radiograph, taken in about ten days, showed considerable union. At this time the splint was removed and the hand bandaged. Examination showed at this time practically no tenderness over the cuneiform, no thickening, and movements of the wrist were executed without pain. Picture taken the middle of January, 1914, nearly two months after the first picture showed union practically complete. A faint line could still be seen. Since this time patient has been using the hand cautiously without trouble or pain of any sort and examination shows practically no more tenderness over the cuneiform of this wrist than of the uninjured wrist.

Interesting points in the case are: The length of time of the disability and pain, without recognition of the nature of the trouble, and the somewhat long period of fixation necessary before union and a cure was effected. This undoubtedly was due to the length of time that the patient had attempted work with the hand, with the fracture still ununited.

Medical Progress.

PROGRESS IN MEDICINE:—RECENT ADVANCES IN CERTAIN BLOOD DISEASES.

BY ROGER I. LEE, M.D., BOSTON.

PRIMARY PERNICIOUS ANAEMIA.

ONE of the many theories of the etiology of pernicious anemia has been that some hemolytic substance is elaborated in the intestinal tract perhaps from the mucous membranes or from some of the fatty acids. McPhedran[1] in a careful study of the hemolytic properties of fatty acids and their possible relations to the causation of toxic hemolysis and pernicious anaemia concluded that hemolysis by liberation of specially hemolytic fatty acids from the fatty complexes of disintegrating cells is not supported by evidence. None of the fatty acids were more toxin than the common oleic acid. Ewald and Friedberger[2] found no hemolytic substance from the mucous membranes of cases of pernicious anaemia.

Splenectomy in Pernicious Anaemia. A certain amount of evidence has been introduced by Banti,[3] Eppinger[4] and others, tending to show

that in pernicious anaemia there is increased hemolytic activity of the spleen. One result of the introduction of this evidence has been the removal of the spleen in certain cases of pernicious anaemia. Eppinger reports seven cases. Klemperer[5] reports ten cases, Mosse,[6] Huber[7] and others, report isolated cases of splenectomy in pernicious anaemia. Most of the cases were reported as improved after splenectomy. In Klemperer's series of ten cases there were two deaths; eight were benefited with one clinical cure.

Splenectomy in pernicious anaemia certainly has some basis on theoretical grounds. On the other hand—the case reports while showing uniformly considerable improvement, fail to arouse much enthusiasm. It is of course too early to pass critical judgment on any therapeutic measure in a disease that runs such a bizarre course as pernicious anaemia.

Salvarsan in Pernicious Anaemia. Inasmuch as arsenic has been advocated for so many years in pernicious anaemia, it is not remarkable that the literature contains some reference to the use of salvarsan in this disease. Boggs,[8] Bramwell[9] and a few others report remarkable improvement in the blood picture of pernicious anaemia shortly after the use of salvarsan. Their favorable experience has not been widely confirmed.

Transfusion in Pernicious Anaemia. Vogel and McCurdy[10] have studied the effect of blood transfusion and regeneration in pernicious anaemia. They give an extensive bibliography. They advise the repeated intravenous administration of rather small measured amounts of blood.

Weber[11] has advised the repeated intramuscular injection of fresh blood in small amounts for all forms of severe anaemia.

Radium in Pernicious Anaemia. Radium has been advocated as a therapeutic agent in all forms of blood diseases including pernicious anaemia. The literature on the subject of the therapeutic use of radium is very confusing. Radium in the form of thorium-x had at first many enthusiastic advocates. Of late, particularly in pernicious anaemia there is a tendency to urge caution in the use of radium preparations and many unsuccessful cases are reported. Meseth[12] gives a resumé of the literature and reports two personal cases of pernicious anaemia unaffected by thorium-x. v. Benczur[13] thinks that pernicious anaemia is favorably influenced by thorium-x which seems to him more effective than arsenic. The only safe conclusion from the evidence to date is that the radium preparations especially thorium-x are not harmless agents in the treatment of pernicious anaemia and that improvement is not the rule and even reported cure is rare.

Splenic Anaemia. The literature continues to be crowded with case reports of splenic anaemia. Most of these cases have been operated and are recorded as clinical cures after splenectomy. The fact now seems established that cases of anaemia and splenomegaly without apparent cause are usually cured by splenectomy. Giffin[14] from the Mayo clinic reports clinical observations on 27 cases of splenectomy. Splenectomy was done in 18 cases of splenic anaemia. Erdmann and Moorehead[15] in discussing the subject of splenomegaly (Gaucher type) review the mortality of splenectomy for various conditions. They believe that the mortality with the present surgical technic should not be over 10%. Erdmann and Moorhead give a good bibliography of splenomegaly (Gaucher type) and report two cases of their own. Splenectomy was done in one case with apparent cure.

Confusion still exists as to the classification and interrelationship of the various anaemias with enlarged spleens. A large number of cases of splenic anaemia of the congenital family type with hemolytic jaundice have been described. Some of the cases of hemolytic jaundice certainly occur as a family group. In others no family history can be obtained.

Haematogenous Jaundice. Richards and Johnson[16] and many others report carefully studied cases with jaundice, splenomegaly, lowered osmotic resistance of the red cells, anaemia with typical staining reaction of the red corpuscles, and urobilinuria. A number of cases of apparent cures in this condition are reported following splenectomy. All the writers, however, point out the fact that the patients with this condition seem very little troubled with it and splenectomy seems a rather radical therapeutic measure for a disease that interferes but slightly with the patient's activity.

In so-called Banti's disease splenectomy is advised by Banti[3] himself and a number of apparent cures are reported after splenectomy. Klemperer and Hirschfeld[4] report one case of splenomegaly and anaemia that developed polycythaemia after splenectomy.

Pearce[17] and his co-workers in Philadelphia have studied experimentally in animals the relation of the spleen to blood destruction and regeneration and to hemolytic jaundice. They have found that the increased resistance of the red blood corpuscles characteristic of splenectomized animals persists for a least a year. There is also a decreased tendency to jaundice after the administration of hemolytic sera.

It seems to be the tendency to support the general supposition that these diseases called clinically "splenic anaemia," "family jaundice" and "Banti's disease," are all primary blood diseases but apparently with the active hemolytic agent in the spleen. The number of cures reported after splenectomy in these various conditions is too great to allow any other assumption than that the abnormal process is situated in the spleen.

Gibson's[18] recent report on the possible infectious etiology of certain of these conditions is of particular interest. Gibson finds that "in the spleens of six cases, three with the picture

of Banti's disease, two with splenic enlargement and fibrosis and one with splenomegaly there was found by a special method of staining an appearance which can be interpreted only as a parasitic invasion of the organ by a streptothrix organism, this being in such a relation to the affected parts, at least in the cases of Banti's disease as to leave no doubt that they are the cause of pathological conditions. Many other spleens examined with the same object in view showed no such appearances." Gibson's work of course points to the infectious nature of certain cases of splenomegaly and Banti's disease. This work naturally awaits confirmation.

Leukaemia. The conflict is still waged concerning the classification of the various forms of leukaemia. Herxheimer[19] in a comprehensive article with an excellent bibliography gives an admirable review of the classification of leukaemia. By means of the so-called oxydase reaction, which is positive in all cells of the myelocyte series and negative in all cells of the lymphocyte series, an adequate means of differentiation seems to have been obtained. Herxheimer reports typical cases of the so-called lymphatic leukaemia and myelogenous leukemia and gives illustrative cases also of leukaemias with cells much less differentiated than the typical lymphocyte and the typical myelocyte which are classified as lympho-blasten-leukaemia and myelo-blasten-leukaemia. He reports one case which seems to have been a true mixed type in one person. The evidence is slowly accumulating that acute myelogenous leukaemia once considered rare is relatively common. Burgess[20] in his study of leukaemia using the oxydase reaction believes that acute leukaemia is usually myelogenous.

Steele[21] reports the finding of a diphtheroid bacillus in a gland from a case of lymphatic leukemia, apparently identical with that found by himself, Negri and Miermet,[22] Bunting and Yates, Billings and Rosenow in Hodgkin's disease. The well known wide distribution of diphtheroid bacilli renders further confirmation of this finding in lymphatic leukaemia as well as in Hodgkin's disease very essential.

The therapeutics of leukemia can be classified under three groups, x-ray, radium preparations and benzol.

X-Ray in Leukaemia. It has been well established that x-ray treatment improves the blood picture and the symptoms and favorably modifies the course of certain cases of chronic leukaemia. Béclère and Béclère[25] report the results of the x-ray treatment of 110 cases of leukaemia since June, 1904. Their 12 cases of lymphatic leukaemia, one of which has been observed for five years, were all improved. Their 93 cases of myelogenous leukaemia were much less favorably affected. There was no effect in the five acute cases. Cumberbatch[26] reports a fatal leukopenia following 111 days of x-ray treatment of a case of myelogenous leukaemia. The white count fell from 691,000 to 850. The differential count was not essentially altered. Warthin[27] studied the minute changes produced in leukaemic tissues by exposure to the Roentgen rays. In none of his cases were the conditions of the haematopoietic organs changed to normal. The effect of the treatment was degenerative and inhibitive but not curative as the essential process seemed to progress unchecked.

Radium in Leukaemia. As in the case of pernicious anaemia extravagant claims have been made for the therapeutic value of radium and its preparations in all forms of leukaemia. Thorium-x has been the preparation usually employed. Rosenow[28] in a critical review concludes that thorium-x has not been of the value in the treatment of leukaemia that it was once considered. Thorium-x often benefits but accomplishes no more than the x-ray and often fails. Meseth[17] reports improvement in three cases of myelogenous leukaemia and apparent cure in one case. Thorium-x was unsuccessful in cases of lymphatic leukaemia. Klemperer and Hirschfeld[29] review the present state of the thorium-x treatment. It is not possible to summarize the extensive and conflicting literature on the subject. It would seem fair to state that certain radium preparations, particularly thorium-x, favorably influence the blood picture and symptoms of certain cases of leukaemia. Cure apparently does not follow or at least is very rare.

Benzol in Leukaemia. v. Koranyi[30] in 1912 first used benzol as a therapeutic agent in leukaemia. He based the justification of his use on some clinical and experimental studies of Selling[31] of Baltimore who in 1910 reported three cases of benzol poisoning with blood destruction. Selling also showed the destructive effect of benzol on the blood in experimental work on animals. Other experimental evidence of the effect of benzol on the blood picture has been reported by Santesson[32] in 1897 and others. v. Koranyi and his assistant Királyfi[33] showed that the administration of daily doses of three to four g. of benzol, preferably given with equal parts of olive oil in capsules had usually a remarkable effect on the blood picture and symptoms in chronic leukaemia. After an initial rise in the white count, diminution in the white count begins after two or three weeks. This diminution is at first slow and then rapid. The red corpuscles are at first stationary but usually increase. The spleen and the glands become smaller. Patients who have had previous x-ray treatment seem to do better. v. Koranyi and Királyfi insist on the necessity of large doses. Gastro-intestinal irritation occurs in some cases. The treatment must be carefully controlled by the blood examination as leukopenia may be accompanied by general blood destruction and death. Since these initial reports, many cases of leukaemia treated with benzol have appeared in the literature. The

large majority of these cases were favorably influenced by benzol. A few cures are claimed. In this country Billings[34] of Chicago and Barker and Gibbes[35] of Baltimore have reported series of cases. v. Boltenstern[36] has recently reviewed the literature to date and gives 38 of the more important references. His conclusions are sound. He believes that benzol improves cases of leukaemia symptomatically, reduces the high white count but without curing the disease. He believes that at this early date no conclusive judgment can be passed on the value of this form of therapy. Several observers while reporting great improvement and reduction to normal of the white count have emphasized the striking fact that in the favorable cases with low white counts after benzol treatment the proportion of leucocytes are but little altered. The disease is still manifest by the relative increase of the abnormal blood constituents. Fatal cases after treatment with benzol have been reported by Neumann,[37] Jespersen,[38] Mühlmann,[39] Sohn[40] and others. In Neumann's case of myelogenous leukaemia the leucocytes fell from 56,000 to 200 before death. Jespersen and Mühlmann both report cases which relapsed and died after apparent cure. The autopsy of these fatal cases showed uniformly the extensive liver necrosis that is also found in animals experimentally poisoned by benzol. Sohn and Billings refer to the fact that with the reduction of the white count there is no coincident increase in the uric acid excretion. Sohn studied carefully the metabolism of a case of myelogenous leukaemia treated with benzol and found no increased uric acid output. This finding is difficult to explain on the assumption that benzol destroys the myelocytes. His interpretation is that there is a leukopenia in the cirulating blood and a hyperleucocytosis in the internal organs. It seems generally agreed that the acute cases are not affected by benzol. Krokiewicz[41] and others report cases of leukaemia entirely unaffected by benzol.

The present status of the problem would seem to be that cases of chronic leukaemia can often be favorably affected in regard to their symptoms and blood pictures by the Roentgen ray, by radium preparations and by benzol. The administration of all these therapeutic measures if pushed may result fatally. Leukopenia is to be avoided. Probably none of these measures really cure the disease. Benzol which is given by mouth has the great advantage of simplicity of administration. The results of benzol treatment appear to be more rapid, and more striking. The dangers would also seem to be greater.

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Book Reviews.

Essentials of Bacteriology. By M. V. BALL, M.D. Seventh edition, thoroughly revised. With 118 illustrations, some in colors. Philadelphia and London: W. B. Saunders Company. 1913.

The first edition of this manual (No. 20 in the series of Saunders' Question Compendia) was reviewed in the issue of the JOURNAL for Sept. 15, 1892 (Vol. cxxvii, p. 270). Since that time the first part of the book, on general bacteriology, has been considerably amplified. This seventh edition has been completely revised, and many chapters have been entirely rewritten. Those on immunity and infection have been edited by Dr. Paul G. Weston, who also contributed the article on the Wassermann reaction. There is at the end a very useful table of the chief characteristics of the principal bacteria. The book aims to be "a concise and systematic introduction to the study of bacteria and allied microörganisms," and seems now to fulfil this purpose as well as is practicable for a work of its size.

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THE GOVERNOR'S MESSAGE ON THE UNPAID BOARDS.

THE Governor's recent message, based on the report of the Commission on Economy and Efficiency as embodied in House Bill No. 2137, prescribes a radical change in the administrative system of dealing with the sick, the delinquent, and the poor in our state institutions. For many years Massachusetts has committed herself to the policy of unpaid boards of trustees in handling these problems. It is fair to presume that a part at least of the efficiency of these institutions, which has made the State a model for others all over the Union, is due to this system and to the class of men and women who have served willingly and without pay on these boards. To sweep away this entire fabric, which it has taken so many years to build up and which, while it doubtless can be improved in many ways, has shown its worth, and to replace it with a system almost revolutionary in nature, is a proposition which deserves the most serious consideration by the medical profession.

Briefly, the new plan as proposed by the Economy and Efficiency Commission, provides for the abolition of the State boards of charity and insanity, the prison commission, the four boards of parole, the commission on probation, the commission for the blind, and the boards of trustees of the following institutions: the four state sanatoria for consumptives, the eight state hospitals and asylums for the insane, the two schools for feeble-minded, the hospitals for epilepties, the hospital cottages for children, the two institutions for inebriates, the state infirmary and the state farm, the three state training schools for children, and the hospital school for crippled children. The inmates of all these institutions number about 22,000. The powers and duties of all these boards and commissions are to be vested in a single paid board of five. This board may appoint a "director of public institutions" who is to have immediate charge of the proper execution of the board's policies. This director, in turn, may appoint four executive secretaries to whom he may delegate such of his powers as he sees fit, as well as a business agent, who is to attend to the buying and distribution of supplies, etc. The bill also provides for the appointment by the Governor of boards of three visitors each, to the several institutions, who will have power to investigate, hear complaints, and to report.

This bill, as explained in detail in the report of the Commission on Economy and Efficiency, aims to remedy certain defects which are supposed to exist in the present system. Among such defects are: a conflict and multiplicity of duties at present assigned to superintendents, defects in methods of accounting, variation in cost per patient and number of patients per employee in institutions of the same class, and a lack of uniformity in organization of departments, business methods, and construction of buildings. Besides remedying these defects, the new system aims to bring about centralizing of authority, closer supervision of work actually done, and economy in obtaining supplies by means of a central purchasing agency.

While to a greater or less degree certain of the defects above mentioned may exist under our present system and should and doubtless will be remedied, there are certain very evident advantages which result from a system of unpaid boards which are not mentioned in the report of the Economy and Efficiency Commission, and which find no place in what they propose to substitute.

Chief among the merits of our present arrangement is the high class of men and women who give their services to the state—men and women, many of whom are experts in their line, and who from disinterested motives and with the one aim to render service to the state, are spending tremendous amounts of time, energy, thought, and labor to this end. To do away with

all this, to annul the personal and humanitarian side of such service, would be a foolhardy and dangerous step. To replace such a system by one which has not proved its worth or stood the test of time and which opens the way for political influences of any kind would be still worse. During the last five years of his life, the late Dr. Arthur Tracy Cabot gave willingly and freely from the deep store of his wisdom and experience, practically all of his time and energy for the cause of stamping out tuberculosis and aiding consumptives in this state. Massachusetts can ill afford to discard one system and inaugurate another which will permanently deprive the state of such services as these.

GROWTH AND NEEDS OF DISPENSARY WORK.

A REMARKABLE development of dispensary service in this country is attested by the Report just issued by the United States Census Bureau. Five hundred and seventy-four dispensaries and out-patient departments are recorded in this publication, representing an increase of 370%, as compared with the 156 dispensaries which were listed* in a similar report issued by the same Bureau in 1904. The number of dispensary patients treated in 1910 is said to be 2,440,018, a figure which is undoubtedly too low, but even this is 50% above the number recorded six years before. The census list of dispensaries omits, for some reason, several institutions of importance, among which the large out-patient department of the Boston City Hospital may be mentioned. It is probable that during 1913 at least 3,000,000 persons received treatment at dispensaries in this country, excluding the commercial dispensaries.

In 1904 the hospitals received 87 patients per 100,000 population of the United States, and in 1910 the proportion per 100,000 had risen to 107, an increase of 23%. Dispensaries and out-patient departments have grown much faster than hospitals, the number of which, between 1904 and 1910, increased only 28%, and the proportion of hospital patients per 100,000 population increased 23%. Dispensary patients per 100,000 population, however, increased from 1982, in 1904, to 2711 in 1910, or 36%.

* The 1904 figures are probably too low, 200 being a more likely figure. This would make the increase, in 1910, 287%.

The following classification suggests some of the varied causes of this rapid growth:

General dispensaries receiving more than 1000 patients a year	291
General dispensaries receiving less than 1000 patients a year	62
Dispensaries for tuberculosis only	167
Other dispensaries for special diseases (eye, ear, nose and throat, gynecological, etc.)	53
Dispensaries not in operation in 1910	1
Total dispensaries in the United States in 1910	574

It will be seen that 167 dispensaries have been established as part of the anti-tuberculosis campaign, and about nine-tenths of these began work between 1904 and 1910, the larger number in Pennsylvania under a state law. But the tuberculosis dispensaries do not account for more than a fraction of the growth between 1904 and 1910. The general dispensaries of the larger type increased during that period more than 200%.

The distribution of the dispensaries is very interesting. Seventy-nine per cent. of the total number of patients treated were in New York, Pennsylvania, Massachusetts and Illinois, and 10% more were in the four additional states of Maryland, New Jersey, Ohio and Missouri. Thus, 89% of the two and a half million patients recorded for 1910 were in 8 of the 48 states. On the other hand, the dispensaries are widely scattered, there being only 8 states in which there are no dispensaries. (In 1904, 27 states had no dispensaries.) While dispensaries have blossomed most freely in the largest cities, such as New York, Philadelphia, Boston, Chicago, Baltimore, Cleveland and St. Louis, their establishment in communities of moderate size is one of the striking features shown by the Census Report.

Other interesting items appear from a study of the expenses. The amount appropriated for dispensary work from public treasuries, mostly municipal, was $23,501 during 1904, and $217,192, or nearly ten times as much, during 1910. While many inaccuracies might be pointed out in the report of the Census Bureau, the larger part are evidently due not so much to inefficiency in Uncle Sam's service as to the inability of dispensaries and out-patient departments of hospitals to furnish the information desired. Nearly two-thirds of the institutions treating 1,000 or more patients a year do not make a financial report showing the expen-

ditures of the dispensary or out-patient department. Most hospitals do not keep their accounts so that the expenses of the out-patient department can be stated separately. This is true even of some of the leading institutions of the country. Only 191 dispensaries reported their expenses for 1910, the total being $1,593,140, a surprising figure in view of the fact that most of the large out-patient departments do not report.

There can be no doubt that dispensary service meets a real demand, which has thus far been manifested chiefly in the larger centres of population. The lack of adequate medical service in many middle-sized industrial communities which have little in the way of hospital provision, and few of the specialists demanded by modern medicine, is coming more and more to the attention of those interested in public health. In such communities, the establishment of dispensaries is beginning. Probably no section of medical work today, in institutions, varies so widely in quality as dispensary service. In too many cases the dispensary or out-patient department has been a feeder, a poor relation, of the hospital, not a clinic in which serious medical work is attempted with the average patient. That the dispensary has a place of its own as a great factor in treating and preventing disease among large sections of the population, is forcing itself upon the minds of medical men and hospital administrators. The appointment by the American Hospital Association, at its convention last autumn in this city, of a Committee on Standards of Out-Patient Work, is a witness of this recognition. Dispensary work has evidently become too large a factor in medical service in this country not to require levelling up, standardization, and progressive development in efficiency.

THE INTERNAL USE OF COCAINE.

IT is remarkable that, with the general properties of erythroxylon coca known for centuries, its most valuable alkaloid, cocaine, which was first isolated in 1859, by Niemann, should have been employed to so small an extent in internal medicine. There are, however, some circumstances which account in part for this. A survey of the literature upon the subject will show an abundance of very contradictory evidence regarding coca and its alkaloids, especially cocaine. In the use of preparations made from the crude plant itself these discrepancies can easily be accounted for, owing to the varying alkaloids contained in coca, some of which are highly toxic; also to possible variations in the strength and composition of preparations, since much of this work was done before the era of standardization of drugs. With a chemically pure cocaine there should not be such wide variations, though unless the cocaine is chemically pure, it may contain a certain amount of two very toxic alkaloids, one of which, isatrophy-cocaine, is a decided heart-muscle poison. Again, ever since the discovery of the anesthetic properties of cocaine the local uses of the drug have attracted such universal attention that the possibilities of its internal employment have been much neglected.

There can be little question that the latter deserves to be resorted to to a far greater extent than is now the case, and an able argument for such use is made in a paper on "The Value of Cocaine in Disturbances of Metabolism," which was read at a recent meeting of the Medical Association of the Greater City of New York, by Dr. William H. Porter, for many years professor of pathology and general medicine in the Post-Graduate Medical School and Hospital. This communication may be regarded as authoritative from the fact that Professor Porter has used cocaine internally for nearly thirty years and in many hundred cases, both acute and chronic. Both historic and experimental evidence, he says, seems to prove conclusively that this substance has the power to augment forcefully almost all the physiological activities of the animal economy and to sustain these augmented functions for a considerable period of time, thus materially enhancing the working power of the system. In physiological dose it stimulates in succession the cerebral hemispheres, the medulla, and the cord. Both mental and muscular activity are augmented to a certain extent, the respirations are increased, and the muscular contraction of the heart is slightly quickened and also increased in force. A slight rise in blood-pressure is caused, and the augmentation of both the respiratory and circulatory activity enhances the reduction processes of the body, an essential requisite in defective metabolism. It stimulates intestinal peristalsis and tends to improve digestion and the absorption of food, while glandular activity in general is more or less increased. It appears to excite all the functions of the body more uniformly

than any other known alkaloid. So long as the dose is kept within the physiological limit, only good will result, but beyond this limit, as in the case of other similar agents, bad results must follow, since it then depresses or arrests the physiological activities at first augmented. That there is a wide difference between its peripheral reflex stimulation and its oxidation reduction within the body is shown by the fact that patients who are profoundly depressed by cocaine when applied locally can take one and two grains of it internally three times a day, not only with no untoward effects, but with highly beneficial results. From the observation of several instances of this kind Porter has concluded that the local and the internal effects of the alkaloid are entirely different, and must be studied separately

In various disease processes and profound disturbances of metabolism in which the normal foods were no longer capable of exciting into physiological activity the sluggish protoplasmic masses of the economy, when everything was at a standstill, as it were, or when it became apparent that the patient was steadily losing ground, he has found, in a large number of cases during the past twenty-five years, that the use of half a grain or more of cocaine three times daily has produced almost miraculous changes for the better, even in those which seemed almost hopeless. In all chronic affections its power for good, he thinks, can hardly be overestimated. For the last ten years he has employed it more and more in the acuter diseases. When cocaine is given early in pneumonia, and throughout the attack, the results have convinced him that the chances for recovery are greater than without its administration. The same may be said of other acute affections, for if it has the great sustaining power which all the evidence seems to show that it possesses, the ability to eliminate the toxins of disease must be markedly augmented by it. It is a point worthy of special note that although he has prescribed this drug so extensively for nearly thirty years, he has yet to meet the first instance in which a patient has acquired the cocaine habit as a result of its internal use. Dr. Porter is accustomed to giving cocaine in capsules, and usually in combination with caffeine and strychnine. Should the criticism be made that one cannot judge accurately as to the true value of a remedy when it is given in conjunction with others, he would refer to the fact that he has sometimes found cocaine efficient in cases where all other means had failed This, to his mind, is the highest test for any remedial agent The discriminating mixture of several alkaloids, by the scientific physician, who knows the exact chemical composition of each, and just what each can accomplish alone and in combination, he believes to be a decided advantage

MASSACHUSETTS CONFERENCE ON TUBERCULOSIS. MASSACHUSETTS ANTI-TUBERCULOSIS LEAGUE.

The sixth session of the Massachusetts Conference on Tuberculosis was held in Boston on March 26, under the presidency of Dr. Walter C. Bailey, chairman of the trustees of hospitals for consumptives. All interested in the movement against tuberculosis were invited to attend and engage in the discussions, and there were many representatives from hospitals, sanatoria, boards of health, tuberculosis and nursing associations, and other organizations interested in health matters in all sections of Massachusetts.

In the forenoon the addresses were by Dr. P. Challis Bartlett, formerly superintendent of the Rutland State Sanatorium, on "Some Present Problems"; by Dr. Cleaveland Floyd, of Boston, on "Tuberculous Infection of Children"; and by Dr. Carl MacCorison, superintendent of the North Reading State Sanatorium, on "The Rôle of Family Clusters in the Prevalence of Consumption." Dr. MacCorison's study of family infection was based on the 1300 cases admitted to his sanatorium during the 3½ years since its opening. Among these there were 134 distinct examples of the incidence of three or more cases of consumption in a single family. Of 9371 persons who died of tuberculosis in Paris in 1911, 2523 were in houses where other cases had occurred.

In the afternoon the addresses at the conference were by Dr. George B. Underwood, president of the Gardner Association for the Relief and Control of Tuberculosis, on "The Social Worker's Educational Influence in the Tuberculosis Campaign"; and by Mr. Seymour H. Stone, secretary of the Boston Association for the Relief and Control of Tuberculosis, on "The Field-Work of the Anti-Tuberculosis Association." Mr. Stone pointed out that the state

has a well-defined policy of combating tuberculosis by providing for early cases at the State sanatoria, and requiring municipalities to segregate advanced cases in local hospitals aided by state subsidy. Several of these papers will be published in an early issue of the JOURNAL.

At the close of the session, Dr. Vincent Y. Bowditch, of Boston, was elected president of the conference for the ensuing year. Following this, the delegates from the various anti-tuberculosis associations organized the Massachusetts Anti-Tuberculosis League, by the adoption of a constitution and by-laws, and the election of the following officers:—

Presidents: Vincent Y. Bowditch, M.D., Boston, ex-President National Association for the Study and Prevention of Tuberculosis; J. F. A. Adams, M.D., Pittsfield, President Anti-Tuberculosis Association; Walter P. Bowers, M.D., Clinton, President Anti-Tuberculosis Association, Pesident Massachusetts Medical Society; James C. Coffey, Worcester, Agent Board of Health.

Treasurer: Arthur Drinkwater, Cambridge, Trustee Massachusetts Hospitals for Consumptives.

Secretary: Seymour H. Stone, 4 Joy Street, Boston, Secretary Association for Relief and Control of Tuberculosis.

Executive Committee: Roger I. Lee, Chairman, Boston; Henry Abrahams, Boston, Cigar Makers' International Union; Vanderpoel Adriance, M. D., Williamstown, President Anti-Tuberculosis Association; Carl A. Allen, M.D., Holyoke, President Association for Prevention and Relief of Tuberculosis; Walter C. Bailey, M.D., Boston, Chairman Trustees Massachusetts Hospital for Consumptives; Enos H. Bigelow, M.D., Framingham; Herbert C. Clapp, M.D., Boston; Eugene A. Darling, M.D., Cambridge.

Already twenty-three anti-tuberculosis associations have joined the League for the purpose of working together in the fight to eradicate the disease. This is an important step and should help to coördinate the work throughout the state.

The office of the League will be at 4 Joy Street, Boston, and anyone interested in the problem can become a member by the payment of $1.00 per year. Anti-tuberculosis associations and other health organizations are eligible to membership.

MEDICAL NOTES.

AWARD TO DR. RICE.—Report from London on March 27 announces that the King's medal of the Royal Geographical Society has been awarded this year to Dr. Alexander Hamilton Rice of Boston, for his distinguished work in the exploration of the Amazon and Orinoco river basins.

TWO FOREIGN MEDICAL CONGRESSES.—The forty-third Congress of the German Surgical Society will be held in Berlin from April 15 to 18, inclusive.

The next congress of the International Association of Thalassotherapy will be held at Cannesvon, April 15 and following days, under the presidency of Professor d'Arsonval. Prince Albert I of Monaco, a member of the Institute of France, will be honorary president. The question which will be specially studied is heliotherapy, and the reports to be presented will deal with the nature of solar radiations at the sea level and the means of measuring them; marine heliotherapy in its relation to actinomometry and climatology, the biological effects and dosage of marine heliotherapy; its effects in surgical tuberculosis, in abdominal tuberculosis, in pleuro-pulmonary and adeno-mediastinal tuberculosis, in the treatment of cutaneous tuberculosis, and in tuberculous affections generally.

GIFTS BY AN AMERICAN PHYSICIAN.—Report from Berlin on March 28 announces that Dr. Joseph Schneider, of Milwaukee, Wis., who in 1912 gave $25,000 for the promotion of public health in his native city of Würzburg in Bavaria, has recently made another gift of $25,000 for the same purpose.

OPENING OF THE HOOPER INSTITUTE.—The Hooper Institute for Medical Research, at the University of California Hospital, San Francisco, was officially opened on March 7, with addresses by Dr. Henry S. Pritchett, of the Carnegie Foundation, and Dr. Richard Mills Pearce of Philadelphia. The institute was founded with an endowment of $1,000,000 in memory of Mr. George William Hooper by his widow.

NEW DEPARTMENT OF ROCKEFELLER INSTITUTE.—On March 31, the New Jersey state legislature passed a bill permitting outside medical societies to engage in animal experimentation within the state. This was done to enable the

location at Rahway, N. J., near the New Jersey Agricultural Experiment Station, of the new department of the Rockefeller Institute for the study of animal diseases, for the endowment of which Mr. John D. Rockefeller has recently given a fund of $1,000,000.

BOSTON AND NEW ENGLAND.

Lectures by Dr. Fischer.—Dr. Guido Fischer, of Marburg, Germany, has been in Boston the past fortnight, giving at the Harvard Dental School a series of clinical lectures to show his methods of local dental anesthesia.

Danvers State Hospital.—The recently published thirty-sixth annual report of the trustees of the Danvers (Mass.) State Hospital records the work of that institution for the year ended Nov. 30, 1913. During this period the total number of patients treated was 2216, of whom 1029 were men and 1187 women. There were 206 deaths, in 86 of which cases autopsies were performed. From the training school, 7 nurses were graduated. Attention is called to the urgent need of a nurses' home for male attendants and married couples.

Boston Lying-in Hospital.—The recently published eighty-first annual report of the Boston Lying-in Hospital records the work of that institution for the calendar year 1913. During this period 884 babies were born in the hospital and 1824 in its out-patient department. Thirty-six nurses were graduated from the training-school. Particular attention should be called to the work of the pregnancy clinic, which during the year had supervision of 1652 prospective mothers. The value of this work in the prevention of pathologic complications and in public education is of great moment.

Massachusetts General and McLean Hospitals.—The recently published one hundredth annual report of the trustees of the Massachusetts General Hospital records the work of that institution for the calendar year 1913, the second year of the second century of its existence. With it is published the ninety-sixth annual report of the superintendent of the McLean Hospital. During this year 6251 patients were admitted to the wards of the General Hospital, 5424 were treated in the accident room, and 24,887 new cases in the out-patient department. The new Nurses' Home was opened during the year, and 46 nurses graduated from the training-school. A similar new home is needed for nurses at the McLean Hospital. At this hospital 364 patients were under treatment during the year; while 733 were received at the Convalescent Hospital in Waverly. The urgent needs of the General Hospital are an administration building, a private ward, and a ward for children. It is earnestly to be hoped that the charitable generosity of the public, of which there has already been abundant evidence, will soon make possible these necessary additions to the equipment of the hospital for further service and progress.

NEW YORK.

Division of Child Hygiene.—Dr. H. L. K. Shaw, director of the Division of Child Hygiene, of the State Health Department, established by the new health law, announces his plans in the *Bulletin* of the department. Among the matters included in these are the establishment of infant milk or welfare stations, the encouragement and systematizing of prenatal work, and local campaigns for the reduction of infant mortality, assisted by the department by means of exhibits, literature and lectures. The division is prepared, he states, to coöperate actively with local officials and others, so that the toll of infant lives this year may be appreciably lessened.

Apropos of the recent appeal of the New York State Grange for a Division of Rural Hygiene in the State Department of Health, the department has announced its readiness to do its part, and Commissioner Biggs expresses the opinion that with sufficient funds to establish and maintain an active and efficient division of the kind, there is no reason why the Health Department cannot save thousands of lives which are lost each year by preventable diseases.

New York Milk Committee.—The New York Milk Committee, through its secretary, Paul E. Taylor, secretary of the New York Milk Committee, has issued a statement in which he asserts that since 1907 more than $2,000,000 has been wasted by the state of New York through indemnity granted to what appears to be the selected list of owners of tuberculous cows. Many of the condemned cows, he says, have been milked until they became dry, and then fattened for food purposes after installations in state institutions. The health of boys who are inmates of these institutions has been endangered

through caring for the tuberculous cows. New York pays from $75 to $125 each for the diseased animals, while the standard price in New Jersey is $15. It is furthermore charged that New Jersey farmers sell the diseased cattle to sausage factories in Jersey City, and that their meat is made into bologna sausages and sold in New York.

PREVENTION OF TUBERCULOSIS.—The committee on the prevention of tuberculosis of the Charity Organization Society has issued a report covering the last three years. In it reference is made to the greatly overcrowded condition of the tuberculosis hospitals of the city. At the large Metropolitan Hospital on Blackwell's Island there have at times been more than 36% more patients than it was designed to accommodate normally, and the same state of affairs has existed to a greater or less degree in all the institutions of the kind. The hospital authorities are not to blame as, under the law, they cannot refuse to admit patients; nor are the financial authorities censured. The latter have been extremely generous, but it seems to have been impossible to keep up with the city's needs. At present, however, the situation is somewhat relieved. An appropriation of $2,000,000 has been made which will soon increase the number of hospital beds available for tuberculosis patients from 2270 to approximately 4000. This provides for the completion of Sea View Hospital, on Staten Island, which will accommodate 1000 patients, for the addition of a new pavilion accommodating 112 at the Metropolitan Hospital, for two additional pavilions at Riverside Hospital, on North Brother Island, and for new pavilions and shacks at the Otisville Sanatorium. The outlook is considered encouraging, as the official reports of the Health Department show that the death-rate from pulmonary tuberculosis in the city has fallen from 2.25 in 1908 to 1.66 in 1912.

APPOINTMENT OF DR. EMERSON.—At a meeting of the City Board of Health, held on March 31, Dr. Haven Emerson, associate in physiology and in medicine at Columbia University and assisting visiting physician to Bellevue Hospital, was appointed sanitary superintendent and deputy commisioner of health.

POLLUTION OF BATHS.—Health Commissioner Goldwater has sent a letter to Borough President Marks in which he states that his department will issue no permits this season for either public or private baths in Manhattan waters, as tests have conclusively shown that the waters of the Hudson, Harlem, East River, and Upper Bay are dangerously polluted with sewage. He expresses the opinion that many cases of typhoid fever and other diseases have been due to bathing in these waters. That the poor may not suffer from this deprivation he urges that increased facilities for interior bathing should be provided by the city at the earliest possible date.

RECEPTION TO DR. L'ESPÉRANCE.—A farewell reception was given Dr. Elise S. L'Espérance, this year's winner of the Mary Putnam Jacobi Fellowship, on the afternoon of April 4, at the residence of Dr. Emily Dunning Barringer, 828 West End Avenue, New York City. All women physicians were invited to meet both Dr. L'Espérance and also Dr. Alice Rohdè, the first winner of the fellowship. The Mary Putnam Jacobi Fellowship Fund was raised through the efforts of the members of the Women's Medical Association of New York City, many of whom had been pupils of Dr. Jacobi at the Women's Medical College of the New York Infirmary. It is open to all women graduates in medicine. Dr. L'Espérance sails in April to continue her cancer research work, which she is pursuing under the direction of Dr. Ewing of Cornell.

Current Literature

MEDICAL RECORD.

MARCH 21, 1914.

1. *MCCASKEY, B. W. *A New Method for Estimating the Functional Capacity of the Kidneys by Forced Elimination of Preformed Urea.*
2. BERKELEY, W. N. *The Use of Pineal Gland in the Treatment of Certain Classes of Defective Children.*
3. CUNNINGHAM, W. P. *Lues—The Incorrigible.*
4. MEYERS, J. *The Passing of the Stomach Tube.*
5. BROWN, J. S. *The Etiology and Surgical Treatment of Gastric and Duodenal Ulcer.*
6. MASSEY, G. B. *Surgical Ionization and Other Physical Forces in the Treatment of Cancer.*
7. MCDONALD, E. *A Skin Varnish and Substitute for Rubber Gloves.*
8. HARVEY, T. W. *Pituitary Preparations in Post-operative Conditions.*

1. McCaskey says that functional impairment of the kidneys may be limited to certain classes of waste products. There may be varying degrees of renal block for urea, chlorides and water, and from a therapeutic point of view it is of the greatest importance

to differentiate between these types because dietetic treatment depends upon it. The phenolsulphonephthalein test is inadequate because there is no parallelism between excretion of phthalein and of urea. By surcharging the blood with urea and determining the rate of its excretion, the permeability of the kidneys for this substance can be determined with great accuracy. Unless there is gastric stasis the ingestion of 30 grams of urea is sufficient. The capacity of the kidneys for the excretion of chlorides and of water can be determined in the same way but the problem is more complex. [L. D. C.]

NEW YORK MEDICAL JOURNAL.

MARCH 21, 1914.

1. BRILL, A. A. *Fairy Tales as a Determinant of Dreams and Neurotic Symptoms.*
2. HOLMES, B. *The Abderhalden Reaction in Psychiatry.*
3. WILLSON, R. N. *Scarlatiniform Eruptions in Septic States.*
4. HAYS, H. *Relaxed Ear Drums.*
5. LOWENBURG, H. *The Etiology and Treatment of Infantile Wasting.*
6. STIMSON, C. M. *The Gynecological Examination.*
7. CORNWALL, E. E. *Acute Lymphocythemia.*
8. WOOTTON, H. W. *Trachoma, and Allied Conjunctival Affections.*
9. HERTZBERG, R. *The Graduate Nurse.*

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

MARCH 21, 1914.

1. *ANDERSON, J. F. *Danger in the Subcutaneous Injection of Solutions of Crotalin, with Report of a Fatal Case.*
2. *OPIE, E. L., AND ALFORD, L. B. *The Influence of Diet on Hepatic Necrosis and Toxicity of Chloroform.*
3. FRINK, H. W. *What Is a Complex?*
4. SCHAIE, M. *Artificial Pneumothorax. A Summary of Forty-Five Cases at Bedford.*
5. CUTTING, J. A., AND MACK, C. W. *The Intraspinal Injection of Salvarsanized Serum in Paresis.*
6. LITTIG, L. W. *Subacromial Bursitis.*
7. BECK, C. *Gastro-enterostomy by a Plastic Flap.*
8. HERTZLER, A. E. *Technic of Vaginal Hysterectomy.*
9. LIPPMAN, C. W. *Simplification of Duodenal Tube Examination.*
10. GASWITH, H. K. *Bromid Eruption Simulating Blastomycosis or Eczema.*
11. BERNSTEIN, H. S. *A Suggestion in the Treatment of Syphilis.*
12. RITTER, J. *An Anomalous Temperature-Curve in the Moderately Advanced Tuberculous.*
13. PATTERSON, J. *Elephantiasis, with a Report of a Case.*
14. MCLEAN, F. C. *The Sugar-Content of the Blood and Its Clinical Significance.*
15. SMITH, F. H. *Benzol Treatment in Two Cases of Leukemia.*
16. WHOLEY, C. C. *Cases of Insanity Arising from Inherent Moral Defectiveness.*
17. OTRICH, G. C. *Lodgment of a Cockle-Burr in the Vestibule of the Larynx.*
18. VROOMAN, C. H., AND WITTICH, F. W. *Apparatus for Producing Artificial Pneumothorax.*
19. LITTLE, Y. A. *Wall of the Stomach Perforated by a Pencil.*
20. STEELE, A. E. *A Case of Micrococcus Tetragenus Septicemia.*

1. Anderson makes out a strong case against the use of crotalin (rattlesnake venom) in any diseased condition in which it is used entirely empirically, such as in epilepsy and tuberculosis.

2. Experiments by these authors furnish evidence that fat administered to animals and presumably stored in part in the liver increases the susceptibility of the organ to the injurious action of chloroform. In view of the well-known solubility and diffusibility of chloroform in fats, they suggest that the fat of the liver cells determines the fixation of chloroform and occurrence of necrosis. The experiments with carbohydrates, on the contrary, furnish confirmation of the views that carbohydrates protect the body proteins from disintegration. Since necrosis of the liver with a variety of diseases, namely, toxemia of pregnancy, acute yellow atrophy of the liver, yellow liver and poisoning with a variety of substances exhibits close similarity to the necrosis of chloroform, it is suggested that a carbohydrate diet may be found to influence favorably the course of these diseases. [E. H. R.]

BULLETIN OF THE JOHNS HOPKINS HOSPITAL.

MARCH, 1914.

1. HENDERSON, D. K. *Remarks on a Case Received in the Henry Phipps Psychiatric Clinic.*
2. CHURCHMAN, J. W. *Essential Sialorrhea in a Dog, Cured by Excision of the Parotid, Submaxillary and a Portion of the Sublingual Glands.*
3. *VEST, C. W. *Observation Following the Use of Collargol in Pyelography.*
4. MILLER, S. R. *Koplik's Spots Occurring on the Tonsils of a Child Subsequently Found to be Anaphylactic to Egg Albumen.*
5. FORD, W. W. *A Brief History of Quarantine.*
6. HUNNICUTT, J. A., AND JONES, A. P. *Tattoo Marks for the Identification of Animals in Laboratories.*
7. THAYER, W. S. *In Memoriam. Reginald Heber Fitz.*
8. THAYER, W. S. *Two Men: George Alexander Gibson, Hugh Angus Stewart.*

3. Vest records some unusual symptoms following the use of collargol in pyelography in six cases. Ten and fifteen per cent. solutions were used. Severe pain may result, with rise of temperature up to 102°, with definite urinary changes. He advises against using collargol for such purposes unless absolutely necessary. If used it should be allowed to enter the renal pelvis very slowly and under very slight pressure. [J. B. H.]

JOURNAL OF MEDICAL RESEARCH.

JANUARY, 1914.

1. WOLBACH AND HONEIJ. *A Critical Review of the Bacteriology of Human and Rat Leprosy.*
2. KOLMER. *Concerning Experimental Anaphylaxis in Labor.*
3. MACLACHLAN. *Extensive Pigmentation of the Brain Associated with Nevi Pigmentosi of the Skin.*
4. BURGESS. *Malignant Rhabdomyoma with Multiple Metastases.*
5. WESTON. *Estimates of Cholesterol in Serum by Gravimetric and Colorimetric Methods.*
6. WHITMAN. *Giant Cell Endothelioma of the Gums with Observations on the Formation of Giant Cells in the Same, and in Tuberculosis and Blastomycosis.*
7. WOLBACH. *Notes on the Life Cycle of a Hemogregarine Found in a Monitor.*
8. SUTTON. *The Histopathology of Fordyce's Disease.*
9. *FLOYD AND WOLBACH. *On the Differentiation of Streptococci; Preliminary Notes.*

9. Floyd and Wolbach present the preliminary report on the work of differentiation of streptococci. As a rule those organisms presenting high virulence

show slight fermentative properties. It is evident that, in all probability, not so many groups of this variety exist as was believed by Winslow. The gentian violet test for virulence may be of rough value, though it is of no great value. Further work is suggested along the line of agglutination and complement fixation. The latter test may prove of great value in differentiation. At present the greatest dependence is placed upon the sugar-fermentation reaction and the virulence of the organisms to laboratory animals. [L. H. S.]

SURGERY, GYNECOLOGY AND OBSTETRICS.

FEBRUARY, 1914.

1. *BREWER, G. E. *A Preliminary Report on a Simple and Rapid Method of Pyloric Closure in Gastro-Enterostomy.*
2. LOWER, W. E. *Neoplasms of the Renal Pelvis; with Especial Reference to Transplantation in the Ureter and Bladder.*
3. *MCWILLIAMS, C. A. *The Function of the Periosteum in Bone Transplants, Based on Four Human Transplantations Without Periosteum, and Some Animal Experiments.*
4. *ELSBERG, C. A. *The Surgical Treatment of Intramedullary Affections of the Spinal Cord.*
5. *MCGLINN, J. A. *The Heart in Fibroid Tumors of the Uterus.*
6. *ROWNTREE, L. G., GERAGHTY, J. T., AND MARSHALL, E. K. *A Study of the Comparative Value of Functional Tests in the Surgical Diseases of the Kidney Secondary to Obstruction in the Lower Urinary Tract.*
7. BALFOUR, D. C., AND WILDNER, F. *The Intercarotid Paraganglion and Its Tumors.*
8. KEYES, E. L., JR. *Concerning Apparent Cures of Renal Tuberculosis.*
9. *COLE, L. G. *The Roentgenographic Diagnosis of Gall-Stones and Cholecystitis.*
10. EASTMAN, J. R. *A Further Study of Pericolonic Membranes.*
11. PHILLIPS, C. E. *Fixation of Fractures by Means of Autogenous Intramedullary Bone Splints.*
12. CROTTI, A. *Indirect Transfusion of Blood.*
13. SKINNER, E. H. *The Mathematical Calculation of Prognosis in Fractures at the Ankle and Wrist.*
14. HARPOLE, W. S., AND FOX, C. M. *Case of Pernicious Anemia Treated by Splenectomy: Marked Improvement.*
15. NICHOLSON, W. R. *The Extraperitoneal Cesarean Section. Its Place in Obstetrics.*
16. BIEHN, J. F. *Some Causes of Failure in Bacterin Therapy.*
17. PRESTON, M. E. *New Appliance for the Internal Fixation of Fractures of the Femoral Neck.*

1. Brewer in animal experimentation finds that an aluminum band will produce a mechanical closure of the pylorus in every instance, that in every experiment in which the animal lived more than nine days the band was completely embedded in newly formed tissue and invisible, and that in none of the animals did the band give rise to necrosis of the compressed tissues, signs of irritation or leakage.

3. McWilliams' article is of extreme value and practical importance. He finds that if the whole diameter of a bone be removed, then this bone will regenerate between the ends of the fragments if the whole or a part of the periosteum be preserved, binding the defect, but very little filling in will take place if the entire periosteum has been removed from between the fragments. Provided a graft be living and taken from the same patient, its future life depends on an efficient blood supply, irrespective of whether it is in contact with living bone or periosteum or not. Periosteum when transplanted alone into soft parts may produce living bone. Splitting of the periosteum of a graft is unnecessary. No matter what the blood supply, grafts should be transplanted with as much periosteum as possible.

4. Elsberg in an excellent paper containing many excellent illustrations, describes his method of extension in the surgical treatment of intramedullary affections of the cord. The method is as follows: The laminectomy being done and the dura opened, a short incision is made over the area where the growth seems nearest the surface, dividing the pia and substance of the column down to the tumor. The tumor will then begin to bulge through the incision. It should never be excised then but the wound loosely closed and reopened at a second operation a week or ten days later, when the tumor will generally be found to have extended itself and can be easily separated from adhesions and removed. Eleven illustrative cases are published in the article.

5. McGlinn does not believe that the definite entity of fibroid heart exists. Arteriosclerosis in these tumors is a part of the advanced age and not directly referable to fibroids.

6. The authors claim that the phthalein test affords an indispensable index of the true renal condition in functional impairment due to obstruction in the lower urinary tract.

9. Cole produces some truly beautiful skiagraphs of gall-stones and emphasizes the importance of Roentgen examination to differentiate between right renal calculi and gall stones. [E. H. R.]

MARCH, 1914.

1. *FINNEY, J. M. T., AND FRIEDENWALD, J. *Thirteen Years' Experience with Pyloroplasty. A Study of One Hundred Cases.*
2. *MACCARTY, W. C. *Clinical Suggestions Based upon a Study of Primary, Secondary (Carcinoma?), and Tertiary or Migratory (Carcinoma) Epithelial Hyperplasia in the Breast.*
3. *JUDD, E. S., AND SISTRUNK, W. E. *End-Results in Operations for Cancer of the Breast.*
4. *DEAVER, J. B. *Gastric Hemorrhage.*
5. CURTIS, A. H. *On the Etiology and Bacteriology of Leucorrhea.*
6. BARNEY, J. D. *Abscess of the Testicle.*
7. BESLEY, F. A. *Elephantiasis Congenitalis Lymphangiectatica. With the Report of Case from the Service of Dr. Besley and a Pathological Report by Harry Jackson, M.D.*
8. VON EBERTS, E. M., AND HILL, W. H. P. *Free Transplantation of Fascia.*
9. MAYO, C. H. *A Summing Up of the Goiter Question.*
10. MANN, A. T. *A Rubber Tube in the Reconstruction of an Obliterated Bile-Duct: an Hepaticoduodenostomy.*
11. MACGOWAN, G. *Conservative Surgery of the Testicle.*
12. BINNIE, J. F. *Some Uses of Fat in Surgery.*
13. PARK, R. *The Relation of the Ductless Glands to the Work of the Surgeon.*
14. LERCHE, W. *Spastic Tumor of the Pyloric Canal and Other Spastic Conditions of the Stomach: Their Surgical Treatment.*
15. MCGRATH, B. F. *A Simple Apparatus for Transfusion by the Aspiration-Injection Method.*
16. KANE, H. F. *Technic of Closing the Abdominal Incision.*
17. PETERKIN, G. S. *Scalpel Surgery of Tumors of the Bladder.*
18. SKILLERN, P. G. *On the Blocking of Infra-Orbital and Mental Nerves at Their Foramina to Induce Operative Anesthesia in Their Cutaneous Distribution.*
19. GARRETT, N. M. *Management of Labor in Cases with Relatively Contracted Pelves.*

1. This article describes by text and beautiful plates the technic of this operation. The authors believe this operation has certain advantages over

gastro-enterostomy and few of its disadvantages. The only contraindications are inability to mobilize the duodenum when adhesions are too dense and thickening and infiltration about the pylorus; also in gastric disturbances not dependent on organic disease. The special advantages lie in the opportunity to excise all ulcers in the anterior walls of the stomach or duodenum after direct inspection, also application of treatment to ulcers in the posterior walls. Immediate and final results are most encouraging.

2. This article is of interest and worth careful study, especially to those interested in carcinoma and its early diagnosis.

3. These authors believe that the end results for cancer of the breast are as good as, if not better, than the results for cancer elsewhere. Prognosis in young people who had the benefit of early operation was better than expected. Results are evidently improving and this seems due to the fact that patients are coming earlier to operation, rather than to any improvement in technic.

4. Mortality in gastric hemorrhage is becoming less, chiefly because of increasing accuracy of recognition of the proper type of case in which surgery is to be employed.

Articles 5, 8, 9, 12 and 13 are of especial interest of a practical sort, but not especially adapted to review. [E. H. R.]

THE LANCET.

FEBRUARY 21, 1914.

1. *HEY, E. W. *Hunterian Lecture on the Experimental Principles of the Operative Treatment of Fractures, and Their Clinical Application.*
2. *SPENCER, W. G. *The Thyreoglossal Tract.*
3. BIBBY, J. B., AND STEWART, M. J. *Primary Carcinoma of the First Part of the Duodenum, with Secondary Involvement of the Common Bile-Duct.*
4. THIEL, F. H., AND EMBLETON, D. *Methods of Increasing the Accuracy and Delicacy of the Wassermann Reaction.*
5. RAWLING, L. B. *Decompression of the Brain in Intracranial Hemorrhage: The Value of the Operation in Cases the Outcome of Accident or Disease.*
6. CORBETT, D. *A New Radiometer for Use with Sabourand's Pastilles.*

1. In this second Hunterian Lecture Graves takes up the methods of transfixing bolts and bolted plates as useful in cases of para-articular fractures, fractures of the long bones, etc. He considers the various kinds of plates, and the use of intramedullary pegs. He discusses the treatment of old cases of non union, indirect fixation by transfixion apparatus, immobilization by splints or plastics, et al. He goes into the various methods of treatment by massage and early movement, and methods of extension. He discusses those cases suited for operative treatment, and compares operative and non-operative methods. There are numerous diagrams and illustrations.

2. In an article with an extensive bibliography, Spencer describes the thyreoglossal tract and the various abnormal conditions, cysts, etc., which may arise along its course. He presents numerous illustrative cases. [J. B. H.]

FEBRUARY 28, 1914.

1. *GILFORD, H. *Hunterian Lectures on Infantilism. Lecture I.*
2. *SHERMAN, T. *The Morbid Anatomy of Tuberculosis in Man.*
3. *FAIRLIE, H. P. *A Comparison of the Action of Chloroform and Ether on the Blood-Pressure.*
4. JONES, D. W. C. *A Case of Chronic Joint Lesions in Hemophilia.*
5. WHITFIELD, A. *On Three Cases of Eczematous Dermatitis Produced by Poisonous Plants.*
6. MAYLARD, A. E. *The Fate of a Plug of Iodoform Gauze Accidentally Left in the Abdomen.*

1. In the first Hunterian Lecture Gilford defines infantilism as a conspicuous arrest or delay of development, subdividing it into infantalism of cells, of organs, or of the individual as a whole. This latter he further subdivides into toxic and correlative infantilism. This somewhat complex subject he considers in great detail.

2. Sherman presents a mass of statistics, tables, and other information of the greatest importance in this article, which, however, is very difficult to review. As a summary of an immense amount of work, brought up to date (the paper was read Oct. 23, 1913, in Berlin) it is of immense value to all interested in this subject. Much of this first paper is devoted to general consideration and a discussion of the nature and modes of infection.

3. Fairlie concludes that ether is better for short operations without shock, but that chloroform is better for longer and more serious operations. [J. B. H.]

BRITISH MEDICAL JOURNAL.

FEBRUARY 21, 1914.

1. *GRAY, H. M. W., AND MITCHELL, A. *A Series of Cases of Appendicitis in Children.*
2. SHEEN, W. *Some Observations on the Operative Treatment of Fractures by Metal Plates and Screws.*
3. MAGUIRE, C. *Congenital Deformity of Femur.*
4. CROW, D. A. *A Case of Chimney-Sweep's Cancer, and a Suggestion as to the Pathology of Cancer.*
5. *CANTLE, J. *The Tuning-Fork and Stethoscope in the Estimation of Abdominal and Thoracic Viscera.*
6. PRUEN, S. T. *Epidemic Cervical Adenitis with Cardiac Complications.*
7. HARRISON, W. J. *Chronically Enlarged Tonsils and Their Treatment.*
8. WILSON, W. *Earache of Obscure Origin.*

1. The writers analyze 200 cases of appendicitis in children. Of the 60 acute cases, 3-13 years, 19 died, a mortality of 15%. There were no cases of either pneumonia or bronchitis in the entire series. He believes that in acute cases a resulting diffuse peritonitis is not uncommon: that prognosis in any given case is absolutely uncertain, and that complaint of abdominal pain, especially when accompanied by sickness should always provoke careful inquiry and examination. No aperients should be given by mouth or by any other route, and all food should be withheld.

5. Cantle describes the use of the tuning-fork-stethoscope method in outlining with precision such organs as liver, spleen, stomach, cecum, heart, etc. The tuning fork, when vibrating and placed over solid organs gives out a loud note; over hollow viscera, only a soft note to the person listening over this area with a stethoscope. This method is of interest and may be of value. [J. B. H.]

FEBRUARY 28, 1914.

1. KEITH, A. *An Anthropological Study of Some Portraits of Shakespeare and of Burns.*
2. *SHUFFLEBOTHAM, F. *The Milroy Lectures on the Hygienic Aspect of the Coal-mining Industry in the United Kingdom. Lecture I.*
3. *FARRANT, P. *The Pathological Changes of the Thyroid in Disease.*
4. HESLOP, J. W. *Dissemination in Carcinoma of the Rectum.*

5. DONALDSON, M. *Some Observations on the Effects of Adrenalin.*
6. *VALLOW, H. *Alcohol, Housing Conditions and Consumption.*

2. This is an interesting study of the conditions in England under which miners work, their domestic circumstances, mortality, the fatal and non-fatal accidents and their causes, and the various diseases which may arise.

3. Farrant, basing his remarks on a study of 700 thyroids obtained at post mortem, discusses first the bactéria and other organisms therein found and then discusses the condition of the thyroid in relation to the disease from which the patient died, including diseases of unknown origin, measles, whooping cough, etc., malignant diseases, glandular and blood diseases. The various changes, such as acute and chronic hyperplasia, he describes in some detail.

6. In a short paper on the relation of tuberculosis to alcoholism and housing conditions, Vallow draws the natural and only possible conclusions which can be drawn from such a study. [J. B. H.]

THE PRACTITIONER.

MARCH, 1914.

1. *LANE, W. A. *Chronic Intestinal Stasis.*
2. *LAZARUS-BARLOW, W. S. *Radiation and New Growths.*
3. *CHEATLE, G. L. *Sprains and Strains of the Knee Joint.*
4. WOODWARD, C. *Treatment of Fractures by Direct Extension of the Fragments.*
5. HOWELL, C. M. H. *Brachial Neuritis.*
6. *CARLISS, A. *The Diagnosis of an Acute Abdomen.*
7. MOORHEAD, T. G. *Endocarditis Lenta.*
8. EMERY, W. D'E. *Recent Advances in Clinical Pathology.*
9. FLEMING, A. *Recent Work on Vaccine Therapy.*
10. KESTEVEN, W. H. *"Myalgia," or Muscular Rheumatism.*
11. CURTIN, E. *An Attempt to Evaluate on a Physiological Basis Some Current Methods of Treating Acute Pneumonia.*
12. ANDERSON, W. K. *Morphinomania.*
13. FRASER, E. T. *The Thermoprecipitin Reaction in the Diagnosis of Pulmonary Tuberculosis.*
14. BILLING, E. *The Relation of the Time of Day to Mortality.*
15. DALAL, A. K. *Care of Rat-Bite Fever, Treated with Intravenous Injections of Neosalvarsan.*

1. In a long paper Lane again reviews the subject of chronic intestinal stasis and cites his own well-known views upon the surgical treatment of this condition. There are many illustrative diagrams. Both the conclusions which Lane draws as to the far-reaching effects of such stasis as the cause of apparently all the ills to which we are subject, and the ideas as to operating go much too far and too fast for the average American to keep pace with.

2. This is a highly technical article on a subject still in the experimental stage.

3. This paper is one of practical value to surgeons and general practitioners. There are numerous excellent plates.

6. Carliss in a long article discusses the diagnosis of various acute abdominal conditions due to hemorrhagic, inflammatory or obstructive lesions. [J. B. H.]

WIENER KLINISCHE WOCHENSCHRIFT.

NO. 1. JANUARY 1, 1914.

1. SCHUTZ, E. *Duodenal Ulcer.*
2. *GRAFF, E. *The Influence of Gravidity on The Growth of Malignant Tumors.*
3. PURJESZ, B. *The Demonstration of Typhoid Bacilli in the Duodenum with the Use of the Einhorn Sound.*
4. WALZEL, P. *Successful Operation on Stab-Wound of the Pancreas.*
5. PFANNER, W. *A Case of Spina Bifida Occulta Lateralis with Bladder Diverticula and Incomplete Urachus Fistula.*
6. BONDI, J. *The Relation of Maternal Nutrition to the Weight of the Fetus.*

2. The author describes seven series of experimental inoculation of cancer in rats with a consideration of comparative rapidity of growth in gravid and non-gravid animals. In one case only was the tumor in the gravid as large as in the non-gravid; in one series there was no growth but resorption in the gravid animals. It would seem from this that pregnancy acts unfavorably to the growth of tumors. Ehrlich's theory of atreptic immunity may offer the explanation. The developing ovum may be considered a parasite as also is the malignant tumor, the one growing at the expense of the other. [F. S. K.]

ARCHIV FÜR KLINISCHE CHIRURGIE.

VOL. 103. PART 2.

10. *KAERGER, E. *Treatment of Cleft Palate, with Particular Reference to Early Operation and Brophy's Method.*
11. *WALJASCHKO, G. A., AND LEBEDEW, A. A. *The Healing of Wounds of Liver, Spleen and Kidney.*
12. RIEDL, H. *Experiences with Nail Extension.*
13. *TOIDA, R. *The Question of the Sterility of Bile under Normal Conditions and Its Bactericidal Effect on Pathogenic Bacteria.*
14. OSHIMA, J. *The Fate of Homoplastic Skin Transplants in Man.*
16. UFFREDUZZI, O., AND GIORDANNO, G. *Experimental Surgery of the Thoracic Aorta under Continuous Intratracheal Insufflation Narcosis.*
16. BRESLAUER, F. *Cerebral Pressure. I. Acute Conditions.*
17. MEYER, E. *Hernia Obturatoria.*
18. BERG, J. *The Recognition of True Stenosis of the Bile-passages from Other Causes Than Gallstones.*
19. GRINENKO, A. P. *The Total Removal of the Prostate by the So-called Hypertrophy Itself.*
20. I. JEGER, E., AND ISRAEL, W. *The Final Result of Transplanting the Renal Veins to Another Portion of the Vena Cava.*
II. GOLIANIZKI, I. *Ligature of the Vessels Preliminary to Disarticulation of the Hip.*

10. A long, technical article with illustrations showing some excellent cosmetic results after Brophy's operation for hare lip.

11. Waljaschko and Lebedew suggest the use of a leaf of superficial fascia in closing wounds of the parenchymatous organs. The fascial covering acts as a hemostatic, and offers the suture-material a hold similar to that furnished by the capsule of an organ. Fewer sutures need be used, and the pressure need not be so great, thereby decreasing the amount of parenchymatous tissue which would otherwise be liable to pressure necrosis. Multiple rupture of the kidney has been treated in this way with good results, and the writers suggest the use of a leaf of fascia as a substitute for the kidney capsule.

13. Toida, experimenting with bile obtained from men and dogs, found that the bile of both is normally sterile. Human bile he found to be a very good medium for bacillus coli, fairly good for the bacilli of Asiatic cholera, bacillus paratyphosus B. and B. dysenteriae (Shiga-Kruse group), slightly favorable for bacillus pyocyaneus and staphylococcus pyogenes aureus. It was unfavorable to the streptococcus pyogenes and diplococcus pneumoniae. The

bile of dogs seemed a less suitable medium for bacillus coli, bact. paratyphi a., bact. dysenteriae Shiga-Kruse and staph. pyogenes aureus.

Human bile appeared to increase the virulence of Bac. Coli Communis, and in the incubator most of the organisms mentioned, except streptococcus and pneumococcus, lived for a month, some for 70 or 80 days. Age and sex seemed of little importance. [G. G. S.]

DIE THERAPIE DER GEGENWART.

JANUARY, 1914.

1. KLEMPERER, S. *In What Internal Diseases Is Operative Removal of the Spleen to Be Considered?*
2. SCHITTENHELM, A., AND MEYER-BETZ, F. *On the Treatment of Septic Affections.*
3. SALGE, B. *The Treatment of Rachitis.*
4. OPITZ, E. *The Treatment of Sterility in the Female.*
5. CLAUS. *What Can the General Practitioner Do in the Prophylaxis and Treatment of Diseases of the Ear?*
6. *LÖHE, H. *Experiments with a New Iodine-Albumin Preparation (Testijodyl).*
7. MEIDNER. *Modern Radium Treatment of Tumors.*

6. Löhe reports his experience with testijodyl, a new iodine-albumin compound, in the treatment of syphilis. His patients took the tablets without difficulty, and he observed no untoward effects. The acne and coryza often observed after iodide of potassium, were lacking. The specific action of the remedy, whether given alone or with mercury and salvarsan, was prompt and very similar to that of potassium iodide. The amount of iodine received by the patient is considerably less than in the usual dosage of the iodide. [L. D. C.]

ANNALES DE L'INSTITUT PASTEUR.

VOL. 24, NO. 1. JANUARY, 1914.

1. MARIE, A. *Activation of the Tetanus Toxin.*
2. *CINCA, A. *Effect of a Chemical Abscess upon Experimental Trypanosomiasis and upon Its Treatment with Atoxyl.*
3. MAZÉ, P. *Investigations upon Vegetable Physiology; Effect of Mineral Solutions upon the Development of Maize.*
4. MAZÉ, P., RUST, M., AND LEMORGUE, M. *Study of Chlorosis of the Higher Vegetables Attributed to the Excessive Richness of the Soil in Lime.*
5. CAZALBOU, L. *The Cultural Evolution of Dermatophytes.*

2. Cinca has studied experimentally the effect of a sterile abscess produced by turpentine upon the presence of trypanosomes in the blood and without the use of atoxyl. The abscess forms from the turpentine in about 4 to 5 days. In his first series he studied the effect of these abscesses upon the trypanosomes of Ouganda and Surra in the guinea-pigs. The appearance of the trypanosomes in the blood was retarded for some time, and after they had appeared such an abscess would make them disappear entirely or become greatly diminished for some time, but a recurrence of the parasites appeared later. The animals treated thus survived somewhat better than the controls. His second series was treated both by the turpentine abscess and atoxyl. The animals treated with both showed a more marked disappearance of the parasites from the blood than those treated only with atoxyl. After the abscess repeated injections of atoxyl would keep the parasites from the blood for a long time but could not produce a permanent cure. He feels that the abscess and atoxyl treatment combined is more satisfactory than either treatment alone and thinks it may prove of considerable value in the treatment of animals for these infections. [C. F., JR.]

BULLETTINO DELLE SCIENZE MEDICHE.

JUNE, 1913.

1. PAZZI, M. *Psychic Disorders of the Female in Relation to the Normal and Pathologic Sexual Functions.*
2. FIORINI, M. *A Useful Device to Augment the Oscillations in the Dynamic Explorer of the Sphygmodynamometer.*
3. MUSINI, E. *A Case of Facial Plastic for Grave Post-operative Deformity, and of Canalization of Stenson's Duct for Salivary Fistula.*
4. BALDONI, A. *The Alleged Diagnostic Value of the Specific Reaction of the Urine in Cancer.*

JULY, 1913.

1. *PUNTONI, V. *Some Cultural Variations of the Cholera Vibrio.*
2. MONTANARI, A. *Stoffel's Operation in a Case of Painful Secondary Contraction from Hemiplegia.*

1. Puntoni describes, and illustrates with two excellent plates, interesting cultural variations in three strains of cholera spirilla obtained respectively from the Bologna and Naples epidemics of 1911 and from St. Petersburg through the Pasteur Institute at Paris. [R. M. G.]

AUGUST, 1913.

1. PUNTONI, V. *Disturbances of Cutaneous Function as a Cause of Gastro-Intestinal Lesions.*
2. BOSCHI, E. *Further Observations on Peptic Ulcer and Especially on Its Attendant Painful Phenomena.*
3. *SANTINI, C. *Experimental Researches on Gas Embolism Following Insufflation of Air into the Bladder.*
4. BONAZZI, O. *Some Observations on the Etiology of Parotitis.*

3. In the *Journal of Urology* for January, 1913, Nicolich and Marion published each a case of fatal air embolism following inflation of the bladder prior to suprapubic prostatectomy. To determine the route by which the air could have entered the circulation, Santini performed twelve experiments on dogs, which he reports and from which he derives the following conclusions:—

(*a*) A healthy bladder will burst from high pressure before injected air will enter the ureters.

(*b*) To force air into the ureters it is necessary to injure the muscular fibres which reinforce the posterior wall of the ureter in its intravesical course.

(*c*) By injecting air directly into the ureters it is possible to make it enter the renal parenchyma so as to produce gas embolism.

(*d*) The air traverses the collecting tubules and the absorption zone between the medulla and the cortex.

(*e*) A minimal pressure, however, is sufficient to force the air through a vesical vein into the inferior cava and right heart.

(*f*) In gas embolism from insufflation, therefore, the route is probably through veins opened by lacerations of the mucosa. [R. M. G.]

SEPTEMBER, 1913.

1. GAVINI, G. *A Case of Pigmentary Urticaria of the Adult.*
2. PAZZI, M. *From the Obstetrico-Gynecologic Field to the Frontiers of Pediatrics and Rational Eugenics. (Preliminary Note.)*

OCTOBER, 1913.

1. *LUSSANA, F. *Influence of Alanin on the Biliary Secretions.*

2. BUSI, A. *The Radiologic Index of the Cranium.*
3. *BONAZZI, O. *A Peculiar Lesion in Reapers.*

1. Lussana's last work is a contribution to the knowledge of the content of amino acids in the organism. All interested in this subject will regret the untimely death of this promising young investigator.

3. Bonazzi has observed that, from the nature of the motions required in their work, reapers are subject with great frequency to acute synovitis of the joints of the thumb and of the extensor tendons of the left hand. This condition, therefore, he regards as an occupation disease. [R. M. G.]

IL POLICLINICO.

SEPTEMBER, 1913.

MEDICAL SECTION.

1. PUNTONI, V. *The Inagglutinable Vibrios, Their Relation to the Cholera Vibrio and Their Importance in the Etiology and Prophylaxis of Cholera.*
2. DE SANDRO, D. *The Amylaceous Bacteria of the Human Intestine.*
3. *FILADORO, P. *Syphilitic Pulmonary Alveolitis with Anthracosis—A Clinico-Histologic Study of the Etiology of Anthracosis.*
4. PONTANO, T. *The Relation Between Serum Diseases and Anaphylactic Phenomena.*
5. VIGANO, L. *The Thermoprecipitins of Micrococcus Melitensis.*

3. Filadoro reports a fatal case of pulmonary syphilis with anthracosis, giving in detail the clinical history and gross and microscopic autopsy findings. He is convinced that anthracosis is a secondary phenomenon. In the case reported it was secondary to syphilitic broncho-alveolitis and interstitial pulmonitis. The inflammatory reaction round about the grains of carbon is a mechanical process, such as always occurs about fractures. [L. D. C.]

SURGICAL SECTION.

1. LEOTTA, N. *Wounds of the Heart. (To be continued.)*
2. *SCALONE, I. *A Process for the Production of Vasal Stenosis.*
3. COMOLLI, A. *Abnormal Evolution of the Peritoneum, of the Primary Umbilical Loop, and of the Common Mesentery.*

2. Scalone describes in detail the technic of his method of producing permanent stenosis of large vessels in the treatment of aneurysm. This description should be read in the original, as it cannot well be abbreviated for abstract. It seems to be a contribution of genuine value to vascular surgery. [R. M. G.]

Obituary.

THOMAS MORGAN ROTCH, M. D.

IN the death of THOMAS MORGAN ROTCH, Professor of Pediatrics in the Harvard Medical School, March 9, 1914, the profession of medicine, Harvard University, and a large number of patients and personal friends, have sustained a grievous loss. Dr. Rotch, for many years the leading specialist in the diseases of children in New England, was born in Philadelphia on December 9, 1849. His father was Rodman Rotch of New Bedford, and his mother Helen Morgan of Philadelphia. His great-grandfather, Samuel Powel Griffiths, was a prominent physician in Philadelphia, holding the professorship of Materia Medica in the University of Pennsylvania from 1791 to 1796.

Dr. Rotch was graduated from Harvard College in 1870, and, having chosen medicine as a profession, entered the Harvard Medical School in the autumn of the same year. While in the school he took the first prize of the Boylston Medical Society. He was appointed one of the house physicians of the Massachusetts General Hospital in the autumn of 1873, and took his medical degree in 1874. Immediately after his graduation he went to Europe to complete his medical education. His studies were especially carried on in the universities of Berlin, Vienna, and Heidelberg, and after an absence of two years he returned to America, settled in Boston, and began his life's work in the practice of medicine.

At this time there was no physician in New England whose practice was especially devoted to children, and there was practically no teaching at Harvard in children's diseases. From the very beginning of his medical career Dr. Rotch evinced the greatest interest in and enthusiasm for the promotion of all knowledge pertaining to children. For the past thirty-eight years he labored unceasingly to increase this knowledge, and his investigations, writing, and teaching have given invaluable additions to this branch of medicine. His constant endeavor was to convince the American people that too little thought and practical attention have been given to the early years of life.

Dr. Rotch's principal life work was the building up in the Harvard Medical School of a department devoted to children. He was convinced that the anatomy, physiology, and pathology of early life differed so greatly from those of adult life, that special teaching of this subject was of the highest importance in medical education. His chief interest was in the organization and efficiency of the pediatric department of Harvard University. In 1888, the university established a chair for the diseases of children especially for Dr. Rotch. His title later was changed to Professor of Pediatrics.

For the past twenty years Professor Rotch was much interested in developing the work of the Infants' Hospital, the first hospital in this country to admit patients restricted to the first two years of life. Dr. Rotch always believed that babies should be cared for in a hospital entirely separate from children and from adults. In this hospital he elaborated one of the great works of his life, the system of percentage feeding, which has made his name well known in Europe as well as throughout America.

In 1902 Professor Rotch was invited to England to address the Children's Section of the British Medical Association on "The American

methods of modification of milk in the feeding of infants," presenting his pioneer work on this subject. This resulted in the establishment of a milk laboratory in London and in the adoption of the percentage method of feeding in England, especially in the London Infants' Hospital, of which at that time he was made consulting physician. Professor Rotch was senior physician of the Children's Hospital and of the Infants' Hospital, and was also medical director of the Infants' Hospital. He was consulting physician to the Boston City Hospital and physician emeritus to the Boston Dispensary.

He has held the positions of president of the Suffolk District Medical Society, president of the American Pediatric Society, president of the New England Pediatric Society, president of the Boylston Medical Society, and councillor of the Massachusetts Medical Society. He was also a member of the Association of American Physicians and of the American Medical Association.

After seventeen years devoted to the study of children and to teaching in the hospital wards and in the Medical School, Professor Rotch published the results of his investigations in a large illustrated work on the Diseases of Children which under the title of "Pediatrics" has since been used as a Harvard textbook. This book had a wide circulation and was accepted as a standard both in America and in England. Of late years Dr. Rotch did a good deal of work developing the use of the Roentgen ray in connection with children. As a result of this work in 1910 he published an illustrated book on "The Living Anatomy and Pathology of early Life as shown by the Roentgen Method." Dr. Rotch has covered in his writings the entire field of early life, always striving to keep before the public the truth that it is the study and practical scientific care of this period of life which produce the best results for good citizenship at a later period.

In 1874, Dr. Rotch married Helen Rotch, the daughter of William J. Rotch and Emily Morgan of New Bedford. They had one son, Thomas Morgan Rotch, Jr., born on May 21, 1878. Dr. Rotch's only son died on March 13, 1902, in less than a year after taking his A. B. degree from Harvard University. The Thomas Morgan Rotch, Jr., Memorial Building of the Infants' Hospital has just been completed and opened. A portion of the funds were contributed at the time of the young man's death by his friends and those of his parents. This hospital, which forms one of the group of buildings surrounding the Harvard Medical School and which is probably the most perfect infants' hospital building in the world, was the chief interest of Dr. Rotch's last years. It remains as a monument to his genius in the planning of details, and is designed not only to be a hospital perfectly adapted to the care of babies, but also to be an educational centre for students, physicians, and the laity in connection with everything pertaining to infants.

All those who came into contact with Dr. Rotch in his life work were impressed with the breadth of his views and his devotion to his profession. He made the teaching of Pediatrics a vital part of medical education. He possessed a remarkable power of carrying out his purposes even against opposition, and his purposes were always big purposes. He was a man of the most untiring energy and perseverance with remarkable genius for organization. His ideals were always high ideals and his aims were always large aims. He looked always far ahead, planning for the future.

EGBERT LE FEVRE, M.D.

DR. EGBERT LE FEVRE of New York, dean of the faculty and professor of therapeutics and clinical medicine in the University and Bellevue Hospital Medical College, died on March 30 from scarlet fever, after an illness of only four days. Dr. Le Fevre was born at Raritan, N. J., on October 29, 1858, and his father, the Rev. James Le Fevre, who was one of the trustees of Rutgers College, is still living. He was graduated from Rutgers in 1880, and from the medical department of New York University in 1883, and in 1910 each of these institutions honored him, Rutgers conferring upon him the degree of ScD., and New York University that of LL.D. He served as interne at Bellevue Hospital, and three years after completing his service there was appointed clinical lecturer on the practice of medicine in the University medical school. When the Bellevue school was united with that of the University he was appointed to the professorship held up to the time of his death. He served successively as visiting physician to the City Hospital and Bellevue Hospital, and was made consulting physician to St. Joseph's Hospital for Consumptives and the Red Cross, Beth Israel, Nassau, Nyack, Mount Vernon, and North Hudson Hospitals. He was also the author of an excellent work on physical diagnosis. Dr. Le Fevre was not only highly esteemed on account of his professional attainments, but greatly beloved for his personal worth, and on the day that his death was announced eloquent tributes to his memory were paid in the chapel of the university by Chancellor Brown and by the chancellor emeritus, Dr. MacCracken.

Miscellany.

INTERNATIONAL SURGICAL ASSOCIATION.

THE fourth congress of this Association will be held at the Hotel Astor in New York City lasting four days, beginning Monday, April 13,

1914. This is the first time that the congress has ever had a meeting outside of the city of Brussels, where the first one was held in 1905 and repeated every three years. The membership of the Association is limited to a certain number from each country. The membership in the United States is about one hundred. The president of the fourth congress is Professor Depage of Brussels, Professor Willems of Ghent is president of the international committee, and Dr. L. Mayer of Brussels is the general secretary. The local secretary is Dr. J. P. Hoguet, 40 East 41st Street, New York City, and the American committee is composed of Dr. Roswell Park (deceased) of Buffalo, Dr. L. L. McArthur of Chicago, Dr. C. L. Gibson of New York City, and Dr. R. H. Harte of Philadelphia. These last three, with the addition of Dr. Rudolf Matas of New Orleans and Dr. R. G. LeConte of Philadelphia constitute the committee designated to represent the American Surgical Association in making preparations for the entertainment of the foreign members.

The program is limited to the consideration of three main topics:—

1. "Gastric and Duodenal Ulcers." Introduced by papers by De Quervain of Basel, Hartmann of Paris, Lecone of Paris, Mayo of Rochester, Minn., Moynihan of Leeds, and Payr of Konigsberg.

2. "Grafts and Transplantations." Introduced by papers by Morestin of Paris, Villard of Lyons, Ullman of Vienna, Lexer of Jena, and Carrel of New York.

3. "Amputations." Introduced by papers by Witzel of Dusseldorf, Ceci of Pisa, Kusmik of Budapest, Binnie of Kansas City, Durand of Lyons, and Ranzi of Vienna.

After the close of the congress, Thursday, April 16, most of the foreign members will make a tour of other cities, the itinerary including Philadelphia, Baltimore, Washington, Chicago, Rochester, Minn., Montreal, and Boston. The foreign members have been invited also to attend the session of the American Surgical Association held in New York at the Hotel Astor April 9, 10, and 11, and many have signified their intention of arriving on the *Imperator*, due April 9.

MEETING ON CANCER.

THE American Society for the Control of Cancer announces a public meeting to be held on Friday evening, April 10, at 8.30 o'clock at the New York Academy of Medicine, 17 West 43rd Street. Final arrangements for a symposium on the nature and control of cancer have been made.

Dr. Clement Cleveland, vice-president of the Cancer Society, will act as chairman of the meeting, and the discussion will be opened by Dr. William H. Mayo, the eminent surgeon of Rochester, Minn., and president of the American Surgical Association, which will be in session in New York City during the week.

Frederick L. Hoffman, LL.D., statistician of the Prudential Insurance Company, who will shortly publish the most thorough statistical study of cancer which has yet been made in America, will present the latest evidence as to the prevalence of this disease in New York City, in the state, and in the country, and will discuss the possibility of controlling the death-rate by educating the public in regard to the symptoms and early recognition and treatment of cancer, as has been done with conspicuous success in Germany.

Professor Francis C. Wood, M.D., director of cancer research for the George Crocker Special Research Fund of Columbia University, will read a paper on "The Nature of Cancer and its Cure." Dr. Wood is in charge of the cancer research laboratory recently built by Columbia University at 116th Street and Amsterdam Avenue.

"The Control of Cancer from the point of view of the Cancer Commission of Harvard University," is the subject chosen by Dr. J. Collins Warren of Boston, professor emeritus of Harvard University, and chairman of the Harvard Cancer Commission. Notable improvements in the treatment of cancer, especially by means of radium, have recently been described in the annual report of the Harvard Commission and are in use under its direction at the Huntington Memorial Hospital of the Harvard Medical School. Dr. Warren is also a trustee of the American Society for the Control of Cancer.

The meeting will be open to the public without cards of admission and there will be no reserved seats.

Correspondence.

THE MASSACHUSETTS MEDICAL SOCIETY.

COMMITTEE ON STATE AND NATIONAL LEGISLATION.

BOSTON, April 3, 1914.

Mr. Editor: The following is the brief of the Committee of the Massachusetts Medical Society on State and National Legislation regarding the very important legislation that is proposed in the Report of the Commission of Economy and Efficiency. Every physician should inform himself regarding the proposed legislation and do what he can to interest his friends in the matter.

Very truly yours,

ARTHUR K. STONE, *Secretary.*

44 Fairfield St., Boston.

The Committee of the Massachusetts Medical Society on State and National Legislation wish to register with the Ways and Means Committee their emphatic protest against the conclusions of the State Commission of Efficiency and Economy in their recent report to the Governor.

The committee is sure that to abolish the Boards having in charge the varied interests of the State wards would be a calamity. The complex problem of

caring for the sick, the mentally defective, and the criminal, requires subdivision and specialization of effort to achieve good results. The committee believes that the long-standing policy of the State of Massachusetts to care for its wards by means of unpaid boards of trustees, who can devote their time and ability to the study of the immediate problem of their particular institution, is a wise one, and has resulted in Massachusetts being in the fore-front of the states in the general intelligent treatment of its philanthropic problems. No single commissioner or small group of men could control all of this vast and varied sociological activity to advantage. Individuals have accepted membership in these unpaid boards chiefly because of an original interest in the peculiar class of persons whom their special board serves. Most interested in the feeble-minded are less so in the blind; those caring especially for dependent infants are more indifferent to prisoners or sufferers from tuberculosis. By long service on their respective boards, many have obtained a high degree of *expert knowledge* which is bound to be of great use to their beneficiaries. To abandon all these benefits, and to put all sorts and conditions of state wards under one central bureau, is to lose enormously in the helpful efficiency of our state charities, even if there were a small saving in the amount of money expended, which our committee doubts would happen. The financial saving would have to be far larger than it is likely to be to counterbalance the dozen or more new, salaried officers whom the bill provides for. And we believe the way the money is spent,—in other words, the expert intelligence employed in its spending,—is quite as important as the mere question of the amount spent.

The committee is further of the opinion that the assumed economies which would be carried out under the proposed machinery would not materialize. Any large institution can probably purchase as cheaply, and, what is of as much importance, have what is adapted to its particular needs, as could a large central purchasing agency, with all the intricate machinery of management which would be necessary to insure honesty and provide for the rapid distribution of materials to the various institutions. This doubtless could be accomplished, but no group of five men paid the proposed salaries could develop such a plan as would work efficiently for a great state like Massachusetts. In addition, the wants of the institutions are so varied that it would doubtless occur that there would be great waste of materials which did not meet the exact requirements of the superintendents; and no mere purchasing agency could be convinced that the special requirements were necessary. Even in the matter of building, the needs of the institutions are so different that no absolute standard of construction is either possible or desirable.

The committee believes that much can be done in a helpful way to standardize methods of accounting, to suggest certain standard methods of building, heating, and ventilation, and to encourage and help overworked superintendents by giving them proper assistants to aid them in their work. It should be recognized that some men are specially good administrators, and consequently should be given specially good clinical assistants; others are specially good in devising plans for the improvement of the persons entrusted to their care, and such men should have specially good administrative assistants.

It must be remembered in any attempt to standardize our institutions, that this state work has been going on for half a century, and that it has not been possible to foretell because of the enormous increase in population, the great complexity of the problems arising from the rapid growth of the urban population. In some cases where seemingly wise plans for the development of the institutions have been made, these plans have not been accepted by the legislatures and make-shift plans have had to be substituted, which in the long run have entailed additional expense.

Wise, helpful, constructive criticism of the institutions will undoubtedly do much to make for general economy, but this committee is quite sure that the plan proposed is destructive in its nature and makes for neither efficiency nor economy.

REGISTRATION OF NURSES: A REJOINDER.

BOSTON, MASS., March 30, 1914.

Mr. Editor: We are all in accord with Dr. Cook's hope "that the physicians of Massachusetts will post themselves thoroughly as to the present tendencies in the registration of nurses," but some of us cannot endorse the implied criticism that the needs of the well-to-do as against the needs of all classes, inspires the motive actuating the effort in behalf of the measure under consideration.

An analysis of Dr. Cook's article, made up largely of six quotations, seems to show that his conceptions of the practical working of the proposed legislation, would be to endow the Board of Registration of Nurses with a power which might imperil the existence of some of the training schools for nurses, and thereby might curtail the education of a sufficient number of nurses to meet the requirements of the people. He intimates that the members of the Board of Registration of Nurses, might use this power in an arbitrary and unjust manner and, therefore, should not be given this weapon to be used in dealing with inferior schools. If his argument should be carried out, then no discretionary powers should be given to any public officials, and every board should have absolute standards to govern its actions, and be made to adhere rigidly to rules made by a Legislature composed largely of people who cannot intelligently deal with problems which individual members may not have studied.

The trend of modern effort seems to be to study all educational methods, and to eliminate the weak or poorly equipped schools, both because the product of the inferior school is undesirable, and also especially because the school which advertises to give a good training and does not do so, is a fraud. Those who have investigated this problem, know that many young men and women have been induced to spend money and years of the best part of their lives in attendance at institutions where the published promises have not been kept.

Does the objector to this legislation, want these frauds, some of which are medical schools and some of which are training schools for nurses, to continue? Does he want imperfectly trained nurses with low moral and professional standards, to be placed before the people of this state simply because the demand for nurses is not fully met?

Have not this eminent physician and his associates, enough influence to induce the Governor to take cognizance of any pernicious activity on the part of the Board of Registration of Nurses?

We all confidently hope that there will be developed a nursing scheme which will provide for the needs of everybody, but in the meantime, it does not seem possible that the proposed legislation, which is only one step in the process of evolution, will be any barrier to progress. Very truly yours,

W. P. BOWERS, M.D.

REGISTRATION OF NURSES: ANOTHER REJOINDER.

BOSTON, March 31, 1914.

Mr. Editor: At the risk of being tiresome I am impelled to reply to Dr. Cook's letter in the JOURNAL of March 26th.

The nurses who are working for House Bill No. 1186 will unite with Dr. Cook in earnestly requesting the physicians of Massachusetts to post themselves thoroughly as to the present tendencies in the registration of nurses.

The writer of one of the letters from which Dr. Cook quoted is Dr. Hornsby, Editor of the *Modern Hospital* and was superintendent of the Michael Reese Hospital in Chicago. Dr Hornsby very kindly sent me a copy of his letter to Dr. Cook so that the nurses might know just what his criticisms were of the law in Illinois, as well as the bill that is now pending in Boston. In regard to the Illinois law he writes the following—not quoted by Dr. Cook:

"You will note also Section 2, line 9, that the board has the right of inspection of hospitals, presumably for the purpose of seeing that the training of nurses is adequate. In most cases the law has worked out all right in this respect . . .", he then cites one instance quoted by Dr. Cook at the hearing in the State House, where the inspector did not use good judgment. He then goes on to say "but on the whole our board members have been extremely sensible and the law seems to be working out all right."

This testimony from a gentleman in Dr. Hornsby's position in Illinois seems to warrant some encouragement to those who are working in other states for similar legislation. He closes the discussion in his letter as follows:

"But I believe most of this controversy is academic rather than vital for immediate purposes, because we have in the leadership of the nursing profession a group of sane, intelligent women who are quite as anxious that proper conditions should prevail as the medical profession could be, or the public, or the administrators of hospitals, and it is my experience that even the most divergent views in this controversy about nursing are apparent rather than real. We are not all of us at exactly the same point in the road of progress and consequently we do not see things from exactly the same angle, but we are going in the same direction, are headed for the same goal and we are all using the same make of compass, so I don't think we are going to get very far apart."

"As a matter of fact, nursing ideals and the qualifications of our present day nurses have improved so vastly in the last few years, under the present leadership in that profession, that it seems to me the whole problem is in pretty safe hands"

I am

Faithfully yours,

SARA E. PARSONS, R.N.,
Superintendent of Nurses.

NOTICES.

MASSACHUSETTS GENERAL HOSPITAL: A surgical meeting open to the medical profession will be held at 8.15 p. m., on April 10th, in the lower ampitheatre of the Out-Patient Department. Entrance on either Blossom or Fruit streets.

Dr. Daniel F. Jones will present a "Report on the Surgical Treatment of Cancer of the Rectum since 1900."

SOCIETY NOTICES.

MIDDLESEX SOUTH DISTRICT MEDICAL SOCIETY.—The annual meeting of the Society will be held at the American House, Boston, on Wednesday, April 15, 1914, at 11.00 a.m. The annual oration will be delivered at 12.00 o'clock, noon, by Dr. Charles D. McCarthy of Malden. Subject: "Medicine and Social Evolution."

Dinner will be served at 1.00 p. m.

LYMAN S. HAPGOOD, *Secretary.*

APPOINTMENTS.

DR. WILLIAM E. CHENERY has been appointed Chief of the Nose and Throat Department of the Forsyth Dental Infirmary for Children.

The following gentlemen have received and accepted appointment to the staff of the Forsyth Dental Infirmary for Children:—

CONSULTING SURGEONS, Hugh Williams, M. D.; F. B. Lund, M. D.; Hugh Cabot, M. D.; H. H. Germain, M. D.

CONSULTING PHYSIOLOGIST, George Tarr Ney Dearborn, M. D., Ph. D.

CAPTAIN ARTHUR N. TASKER, Medical Corps, United States Army, has been selected as lecturer on tropical medicine at the Long Island College Hospital. This is a new chair recently established by the faculty of the school.

RECENT DEATHS.

DR. WALTER A. HAYNES, a dentist of Boston, died on March 28 at Revere, Mass. He had served for many years on the Revere board of health. He is survived by his widow.

DR. CHARLES EMERY ROWELL, who died on March 29 at Stamford, Conn., was born in Concord, Vt., on May 2, 1849. He graduated in 1875 from the New York Homeopathic Medical School, and for five years practised his profession in New Hampshire before removing to Stamford. He served as mayor of that city in 1910, having previously been its coroner and a member of the local board of health. He is survived by his widow and by three sons.

DR. GEORGE P. COOKE, who died on March 22 at Milford, Mass., was born in 1850. He graduated from the Harvard Dental College in 1869, and since that time had practised in Milford.

DR. A. WALDO FORBUSH, who died recently in Somerville, Mass., was born at Westminster, Mass., on Aug. 11, 1851. After graduating from Westminster Academy, he received the degree of M.D. in 1881 from the Eclectic Medical College, New York. He practised successively in Charlestown and in Somerville. He was a member of the Massachusetts Homeopathic Medical Society, and of the Massachusetts and Boston District Eclectic Medical Societies. He is survived by his widow.

DR. CHARLES LYMAN HODGKINS, who died recently in Park Falls, Wis., was born at West Roxbury, Mass., in 1870. He received the degree of M.D. from Georgetown University. During the Spanish War, he served as surgeon of the Seventeenth United States Regiment. Subsequently he practised successively at Castleton, Vt., Cotter Hill and Memphis, Tenn. He also worked for a time as sanitary engineer in Ecuador. He is survived by his widow.

DR. JULIA A. MARSHALL, of Norfolk Downs, Mass., died at Boston on March 26. She was born in 1841.

DR. VINCENT HAMILL, who died of heart disease recently in New York City, was born at Phoenix, N. Y., in 1873, the fourth generation in the direct line of a family of physicians. He attended Cornell University, and received the degree of M.D. from the Buffalo (N.Y.) Medical College. He is survived by his widow.

DR. JOHN WALDO JOHNSON, who died at Boston on March 24, was born on June 14, 1856, in South Framingham, Mass. He graduated from the Framingham Academy, and received the degree of M.D. in 1877 from the Harvard Medical School. He was a Fellow of The Massachusetts Medical Society. He is survived by his widow.

DR. JOSEPH F. NEE, who died recently in South Boston, was born at Scituate, Mass., in 1880. He graduated from Georgetown University in 1904, and since that time had practised dentistry in South Boston.